INSECT PEST SURVEY BULLETIN

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THE MORE IMPORTANT RECORDS FOR AUGUST, 1932

With the harvesting of early small grains the grasshoppers have concentrated on flax, late small grains, alfalfa, and corn, and caused considerable losses in certain areas in the Northwest. During the month, over part of the territory, parasitic flies appeared to be reducing the infestation.

White grubs are generally abundant from New England to Kansas, with local serious damage.

Hessian fly surveys in the Middle Atlantic, East Central, and West Central States indicate that there will be heavy infestations on early planted wheat in western Maryland, Pennsylvania, Ohio, Indiana, Illinois, eastern Kansas, Missouri, and northeastern Nebraska. The situation is more threatening than it has been in many years over most of the Winter Wheat Belt.

The chinch bug was reported doing considerable injury in the vicinity of La Crosse and along the Mississippi River in Pierce, Pepin, and Buffalo Counties, Wisconsin, and Lake, Itasca, Hennepin, and Goodhue Counties, Minnesota, this region being very much north of the normal chinch bug belt.

A severe outbreak of fall armyworm was reported by wire on September 2 from northwestern Texas.

The corn ear worm is generally prevalent throughout the greater part of the United States and, as usual, causing considerable damage to both sweet and field corn. In New Jersey it was observed attacking celery, an unusual food plant for this insect.

The European corn borer was found early in the month in the suburbs of Racine, Wis. It appears that the infestation located last August in Sheboygan and Manitowoc Counties has been cleaned up.

The cotton leaf worm has not yet appeared in the South Atlantic States, nor as far north as Arkansas. This is unusually late for the appearance of this insect.

The codling moth is reported as from abundant to very abundant throughout the greater part of the country. In Illinois it has been more abundant than at any time during the last 10 years.

With the short crop of peaches the injury to the fruit by the oriental fruit moth has been much more serious than usual and the insect seems to be on the increase throughout the Middle Atlantic, South Atlantic, and East Central States.

Blister beetles are doing very considerable damage to a great variety of crops from New England westward to Nebraska and Kansas.

Potato leafhoppers with the associated hopperburn are appearing in numbers in the northern Middle Atlantic States, westward to Minnesota.

The potato psyllid with the associated psyllid yellows is quite prevalent in parts of Colorado and Utah.

The Mexican bean beetle has been reported for the first time from New York and Cumberland Counties, Maine, and from Bennington and Rutland Counties, Vermont, these being the northernmost records for the spread of this insect. It was also recorded from southwestern Nebraska, this being the first record the Survey has received of this insect in that State.

The harlequin bug is generally prevalent considerably north of its normal habitat.

The elm leaf beetle is being reported as prevalent from New England and New York, and local outbreaks have developed at Knoxville, Tenn., and Parma, Idaho.

The gladiolus thrips is quite generally reported as damaging gladiolus flowers from New England throughout the Middle Atlantic States and in Tennessee and Minnesota.

Forty-one cases of Rocky Mountain spotted fever have been reported from Maryland and Virginia during this year up to August 17.

G E N E R A L F E E D E R S

JAPANESE BEETLE (Popillia japonica Newm.)

Connecticut. W. E. Britton (August 23): This pest is gradually spreading and will soon be found throughout the State. Reported at Bridgeport attacking rose, grape, and many trees, shrubs, and plants.

Pennsylvania. L. B. Smith (August 26): The Japanese beetle is causing heavy damage in Philadelphia, Bucks, Montgomery, Delaware, and Chester Counties; confined to suburban Philadelphia.

New Jersey. R. C. Burdette (July 25 and 26): Japanese beetles are causing considerable damage to asparagus in the Woodstown-Swedesboro section.

GRASSHOPPERS (Acrididae)

Maryland. Washington Times (August 8): A number of young apple trees stripped of foliage and some damage to bearing trees in an orchard near Frederick Junction.

Georgia. C. I. Snapp (August 2 and 5): The bird grasshopper, Schistocerca americana Drury, had done considerable feeding on the foliage of peach trees during the first week in August. The damage was confined to those orchards near sodded fields. Poison bran was used as a control. (Peach County)

Indiana. H. O. Deay (August 26): Local outbreaks occurred in southern part of the State and at Culver in the northern part during the first part of the month. Millions of Melanoplus differentialis Thos. had moved into orchards and corn fields at Vincennes, July 30, and had damaged one year old apple trees seriously by August 6. Very serious in alfalfa at Culver, August 3. In Vanderburg County, which is in the extreme southern part of the State, one correspondent estimated that 90 per cent injury had been done to corn. However, most of the grasshoppers had been killed by a fungus disease by the middle of the month.

Michigan. R. H. Pettit (August 22): Grasshoppers are very bad in the upper Peninsula, and they are bad in the upper one-third of the lower peninsula.

Wisconsin. E. L. Chambers (August 22): The heavy rains have tended to reduce the numbers of grasshoppers and many of them have been killed by parasites and disease.

Minnesota. A. G. Ruggles and assistants (August): Grasshoppers were still very abundant during August over most of the infested territory, although they were decreasing very rapidly where poisoning was carried on. (Abstract, J.A.H.)

North Dakota. F. D. Butcher (August 5): With the small grains ripening and being harvested, the hoppers are concentrating on flax, late oats, alfalfa and corn. A lot of corn is being damaged by having the silks cut before the grain has been fertilized.

A. D. Collette (August 13): Most damage from grasshoppers done in sandy ridges in southeastern and eastern parts of Steele County. Very little damage done in north and northeastern part of county. Damage spotted, in some places 100 per cent. Some crops, as flax and sweet clover seed, are a total loss.

H. O. Putman (August): Grasshoppers are damaging gardens in towns of Burleigh County. They have also damaged crops on the lighter soil--flax, corn, and some small grain in many places. Stewartdale, McKenzie, South of Wilton report the most damage.

B. Daggett (August 12): On account of an abundance of feed this year grasshoppers seem to be more in large bunches in certain areas than to be scattered uniformly over the entire area in Ward County. There appears to be from two to three times as many hoppers now as usual. Many townships where no poisoning was done last spring now realize that poisoning should have been done. Apparently at the present time there is every indication that our outbreak next year will be more severe than this year.

J. A. Munro (August 17): Grasshoppers are responsible for serious injury to corn, flax, potatoes, and other late crops in the more heavily infested portions of the State.

South Dakota. H. C. Severin (August 23): A marked decrease in numbers of grasshoppers over most of the State, due largely to Sarcophaga kelleyi Ald. and migrations. Extensive migrations have decreased numbers in general over the State but have given us more general distribution of the pests throughout South Dakota. A secondary parasite is cutting down the effective work of Sarcophaga kelleyi. In some areas the secondary parasite is fully as abundant as the primary. There have been sporadic outbreaks here and there of fungous and bacterial diseases.

Missouri. L. Haseman (July 27): Through central Missouri, at least, the grasshopper situation has greatly improved in the past month. (August 25): Except in young alfalfa, the grasshoppers have done practically no damage this month.

Nebraska. M. H. Swenk (July 20 to August 25): The grasshopper situation during August receded almost to normal. Localized damage in cornfields occurred, and while at the present time there are enough grasshoppers in some places to threaten damage to fall-sown alfalfa and wheat, on the whole further severe damage by grasshoppers is not indicated anywhere in the State this season.

Kansas. H. R. Bryson (August 17): The grasshopper situation in Kansas is about average this year although observations indicated they were very abundant along ditches and roadsides in a number of counties, including Jewell, Riley, Geary, Cloud, Republic, and Mitchell. No evidence of serious damage was indicated. The species which appeared most abundant were Melanoplus differentialis Thos. and M. bivittatus Say.

Tennessee. G. M. Bentley (August 17): Grasshoppers were reported in eastern Tennessee in Hixson, Hamilton County, and parts of Rutherford, Obion, and Lincoln Counties, as very abundant. Doing damage in millet, clover, alfalfa, and corn.

Oklahoma. C. F. Stiles (July 26): Grasshoppers are extremely abundant along creek banks and fence rows in various sections. The outbreak is general but localized in communities where there is an abundance of waste land. The "yellowleg" (M. differentialis) is the most abundant. Many farmers are using poisoned bran mash to control them, but the low price of farm products is preventing a number of farmers from poisoning on waste landsalthough they would like to.

Idaho. R. W. Haegele (August 24): Moderate damage by grasshoppers in southern

and eastern Idaho during August. Heavy parasitization by a sarcophagid reported in Power County. The grasshopper population is expected to be on the decrease in 1933.

Nevada. G. G. Schweis (August 17): Grasshoppers (a number of) are very [illegible] abundant and doing heavy damage to second crop alfalfa.

Utah. G. F. Knowlton (August 17): Grasshoppers (M. femur-rubrum DeG.) are moderately to very abundant in northern Utah. Adults are becoming more abundant

MORMON CRICKET (Anabrus simplex Hald.)

Idaho. R. W. Haegele (August 24): Mormon cricket eggs are being deposited freely in areas of the 1932 outbreak in eastern Idaho. A serious infestation is probable in 1933.

South Dakota. H. C. Severin (August 23): Two small colonies of the Mormon cricket found, one at Bee Heights and the other at Murdo.

WHITE GRUBS (Phyllophaga spp.)

Vermont. H. L. Bailey (August 22): White grubs are very abundant, damaging potatoes in the western part of the State.

Pennsylvania. J. N. Knull (August 10): About 80 per cent of the conifers planted near the Cole House, Perry County, were killed or injured by white grubs. L. B. Smith (August 26): White grubs are very abundant locally throughout the State.

Ohio. E. W. Mendenhall (July 30): The white grubs are exceedingly abundant and are doing considerable damage to strawberry plants and in some cases have totally destroyed whole plantations in the central counties of Ohio.

Illinois. W. P. Flint (August 19): White grubs are causing very serious injury in the northern part of the State, the infestation this year being caused mainly by grubs of Brood B. The whole area is quite generally and heavily infested with the small grubs of Brood A. As both broods will be working in the soil during the early part of next season, we expect very serious damage from these insects in that part of Illinois in 1933.

Wisconsin. C. L. Fluke (July 27): White grubs are very abundant. Brood A began hatching the first of July.

Minnesota. A. G. Ruggles and assistants (August): White grubs were quite serious in Ramsey County, badly damaging golf courses and strawberry plantations. This insect was also reported as very abundant in eastern Polk County, but from scarce to moderately abundant over the remainder of the State. (Abstract, J.A.H.)

Missouri. L. Haseman (July 27): Great numbers of nearly mature grubs, especially in sod ground at Columbia.

Nebraska. M. H. Swenk (July 20 to August 25): White grubs are moderately injurious in blue-grass lawns and strawberry beds during the period here covered.

Kansas. H. R. Bryson (August 15): White grubs are moderately abundant. (August 16): Young white grubs are very numerous at Manhattan. Some potatoes grown in city lots are damaged.

CALIFORNIA TORTOISE SHELL (Aglais california Bdv.)

California. E. O. Essig (August 17): Second migration, or dispersal, of the adults of the second brood of the California tortoise shell butterfly from the High Sierras of the Lake Tahoe region to the lowlands July 15 to August 15.

C E R E A L A N D F O R A G E - C R O P I N S E C T S

WHEAT

HESSIAN FLY (Phytophaga destructor Say)

Pennsylvania. H. E. Hodgkiss (July 26): Hessian flies are very abundant and damage is very severe.
L. B. Smith (August 26): Hessian flies are moderately abundant in southeastern Pennsylvania.

Illinois. W. P. Flint (August): The regular Hessian fly survey carried on cooperatively between the Natural History Survey and the Federal Bureau of Entomology has just been completed. This year there has been a very marked increase in infestation throughout the central and southern parts of the State. Through A. J. Surratt, Agricultural Statistician, Bureau of Agricultural Economics, U. S. Department of Agriculture, a special report on Hessian fly conditions was received from 680 of the regular crop reporters located in all counties in the State. These reports of damage and no damage to winter wheat may be taken as an additional check on the conditions found in our regular survey. This increase in fly infestation was mainly due to weather conditions. The fall of 1931 was extremely favorable to an increase and this was followed by especially favorable weather during the egg-laying period of the spring brood of the fly. The heavy spring brood resulted in serious damage to spring wheat, this brood coming from wheat that was sown early in the fall of 1931, and also from volunteer wheat. At the present time there is an abundance of volunteer wheat in practically all sections of the State. The fall brood of the fly is just starting to emerge and lay eggs. If the present rainy, warm period continues the fall brood of the fly should all be out by the normal safe sowing date. If September is dry, emergence will be somewhat delayed and egg laying will probably take place a few days after the normal fly-free date. In any case the infestation is so heavy in most parts of the State south of a line drawn through Carroll, Ogle, and Kane Counties that with anything like normal weather conditions early seeded wheat is sure to be heavily infested.

East Central States. C. M. Packard (August): The area covered by this report includes Tennessee, Kentucky, Ohio, Indiana, southwestern Michigan, and southern and eastern Illinois. There was serious injury of the 1932 crop in many Illinois and Indiana fields, some being practically a total loss. Infestation was comparatively light and injury negligible in Kentucky, Tennessee, and southwestern Michigan. Fly abundance was variable in Ohio, being greater in the northern and west-central parts where heavy infestations were prevalent,

though not of sufficient intensity to reduce yields seriously. The outlook for fly injury this fall in Ohio, Indiana, and Illinois is the most threatening in years. Practically every stubble field contains enough puparia to be a potential source of heavy infestation in any early fall-sown wheat near by. While the percentage of parasitized puparia is higher than usual in Ohio and Indiana, viable puparia are still very abundant in the stubble. The prospect is less threatening in Kentucky, Tennessee, and southern Michigan but with fall weather favorable to its activity the fly is likely to cause material injury to the 1933 crop in these States also. The following table summarizes the records on which this report is based. Field samples consisted of 50 stems and plot samples of 100 stems, the average infestation in each set of plots being used as a single field. The figures below are entirely our own but the report of the Ohio State Hessian fly survey has been referred to in summarizing the situation in that State.

Area	Number of localities	Number of fields	Per cent of stems infested
S. W. Michigan	11	19	19
N. E. Illinois	12	12	14
E. and S. Illinois	35	46	44
Indiana	95	198	41
Ohio	49	67	32
Kentucky	35	51	8
Tennessee	49	98	12

West Central States. J. R. Horton (August): This report is based on a survey during June and July covering Kansas, Missouri, Nebraska, and Oklahoma, exclusive of areas beyond the present range of serious Hessian fly outbreaks. Severe damage, resulting in partial to complete loss of the 1932 winter wheat crop of many fields, was done by the fly in Missouri, southeastern Nebraska, and some counties of north central and northeastern Kansas during the season 1931-'32. Infestations were comparatively slight and crop reductions relatively unimportant in southern Kansas and northern Oklahoma. The prospects of fly injury to the winter-wheat plantings of the coming fall are unusually threatening in Kansas, Missouri, and Nebraska, except in the frontier areas of occurrence already mentioned. Most of the Missouri counties inspected and most of the normally fly-populated counties of Nebraska are strewn with heavily infested stubble fields. The same is true of some of the counties sampled in northeastern and central Kansas; while even those of the southeastern portion of this State have a scattering of sufficiently infested fields potentially to give rise to outbreaks in neighboring fall-sown wheat. Although the percentage of parasitized puparia is greater than usual over most of these areas, there are still sufficient numbers of living Hessian fly larvae present to favor ready emergence and plentiful egg deposition in the fall. The outlook is not serious in the northwestern portion of Kansas, where the fly rarely becomes abundant, but even in that section there is a very noticeable increase of puparia and sufficient population now present for potential local outbreaks following weather favorable to fly increase. The prospects for northern Oklahoma are good in that the summer infestations are slight, except locally in the extreme northeastern portion. The attached table summarizes the results from which this report is drawn and includes records from a total of 930 samples, 565 of which were our own; 270 were supplied by the Nebraska experiment station, 76 by the Missouri station, and the remainder by the Kansas station. A large proportion of the samples were

of 50 stems each; the rest of 100 or more stems each.

State section	Number of counties	Number of samples	Percent of stems infested
Kansas:			
Northeast	6	36	25%
Southeast	12	47	15%
North Central	9	47	27%
South "	14	93	22%
Northwest	7	26	15%
Missouri:			
Northeast	11	28	34%
East Central	16	93	31%
Southeast	5	27	25%
Northwest	12	43	18%
West Central	11	47	35%
Southwest	6	26	20%
Nebraska:			
Northeast	4	25	26%
Southeast	19	186	32%
North Central	1	7	34%
South "	17	122	27%
Southwest	1	5	4%
Oklahoma:			
Northeast	8	25	7%
North Central	5	29	3%
Northwest	2	13	3%
Iowa:			
Southwest	2	5	8%

Nebraska. M. H. Swenk (August): This survey was started shortly after harvest and has just been completed. In it a total of 344 fields, located in 41 counties, were sampled. From 5 to 15 samples were taken from a county, according to size, the apparent density of the fly infestation in it, or other reasons. Each sample consisted of either 50 or 100 wheat stems taken at random from the field. The counties included in the survey involved all of southeastern Nebraska north and west to and including Washington, Dodge, Colfax, Platte, Nance, Howard, Buffalo, Dawson, Frontier, and Furnas Counties. The bulk of the samples were collected by O. S. Bare, Extension Entomologist of the College, and H. H. Walkden and J. R. Horton, of the U. S. Entomological Laboratory at Wichita, Kans. From the survey it is apparent that the principal threat of Hessian fly damage this fall lies in Thayer, Fillmore, Jefferson, York, Seward, Lancaster, Johnson, Butler, Colfax, Platte, Nance, Merrick, Hamilton, Howard, Hall, Buffalo, Kearney, and Phelps Counties, and the indications in these counties are for a heavy main fall brood and a severe attack on all of the wheat that is sown too early to avoid the attack of this brood. With weather conditions favorable for the fly, most of the other Nebraska counties included in the survey are also likely to experience serious damage by this pest.

Missouri. L. Haseman (July 27): The stubble survey is practically completed for the State and will be reported by the fly survey committee in August. Infestation is heavy across central Missouri.

WHEAT-STEM SAWFLY (Cephus cinctus Nort.)

North Dakota. J. A. Munro (August 17): The wheat-stem sawfly was reported from Glenburn. The report stated that it had caused 30 per cent of the wheat stems to break over.

WHEAT STEM MAGGOT (Meromyza americana Fitch)

South Dakota. H. C. Severin (August 23): Wheat stem maggot injury to wheat and barley has been unusually severe during the past year over South Dakota.

SAY'S PLANT BUG (Chlorochroa sayi Stal)

Utah. G. F. Knowlton (August 1): Say's plant bug is doing serious damage to wheat heads at Ibapah.

CORN

CHINCH BUG (Blissus leucopterus Say)

Ohio. E. W. Mendenhall (August 17): In some sections of Franklin County the chinch bug did some damage to sweet corn. Hardly a year passes without an outbreak somewhere in Ohio.

Illinois. J. H. Bigger (August 16): The chinch bug is moderately abundant in western Illinois.

Michigan. R. Hutson (August 22): The chinch bug is moderately abundant in the southern tier of counties.

Wisconsin. E. L. Chambers (August 22): Chinch bugs have been reported doing considerable injury for the first time in years in the vicinity of LaCrosse, and along the Mississippi River in Pierce, Pepin, and Buffalo Counties.

Minnesota. A. G. Ruggles and assistants (August): The chinch bug is damaging corn in Lake, Itasca, Hennepin, and Goodhue Counties. (Abstract, J.A.H.)

Missouri. L. Haseman (August 25): The summer brood of the chinch bug is quite abundant in some sections but the abundant rainfall over the infested area is preventing serious damage.

Kansas. H. R. Bryson (August 15): Chinch bugs are scarce at Manhattan, and reported as being very abundant at Sedgwick.

Oklahoma. C. E. Sanborn (August 24): The chinch bug is very abundant. Dispersing August 14.

Mississippi. C. Lyle and assistants (August): Chinch bug damage to a large field of corn observed at Dublin, August 6. (R. B. Deen and G. L. Bond.)

CORN EAR WORM (Heliothis obsoleta Fab.)

Connecticut. W. E. Britton (August 23): Common throughout the State, probably no more abundant than in 1931.

New York. N. Y. State Coll. of Agr., Weekly News Letter (August 22): The corn ear worm caused a lot of damage in early sweet corn this year in Onondaga County, some plantings being totally destroyed.

New Jersey. R. C. Burdette and T. J. Headlee (August 2 and 4): The corn ear worm is unusually abundant and most corn is more than 50 per cent injured by this insect. (August 24 and 25): Eggs were found on celery at Mullica Hill. This is apparently a new host for the corn ear worm. This insect was identified as being in celery last year. The general infestation of corn this year and the number of moths now present would indicate that celery will perhaps suffer considerable damage from this insect. This condition will be closely followed and checked up each week to determine just what may be expected from this infestation.

Pennsylvania. T. L. Guyton (August 22): The corn ear worm is very abundant in all parts of the State.

Virginia. H. G. Walker (August 25): The corn ear worm was very abundant on sweet corn and is moderately abundant on field corn at Norfolk.

Michigan. R. H. Pettit (August 22): The corn ear worm is very abundant everywhere.

Wisconsin. E. L. Chambers (August 22): The corn ear worm has been present in all localities of the State but not nearly as severe as last year.

Missouri. L. Haseman (August 25): Sweet corn in central Missouri is now (August 26) showing an abundance of young corn ear worms and an occasional full fed worm.

Arkansas. D. Isely (August 23): I neglected to get other records of the corn ear worm, although larvae were swept from alfalfa in the latter part of May. I have always been inclined to think that this species winters in Arkansas.

Utah. G. F. Knowlton (August 15): The corn ear worm is causing serious damage to sweet corn in most parts of Davis and Salt Lake Counties, and in other parts of northern Utah.

New Mexico. J. R. Eyer (July 31): The corn ear worm is very abundant on sweet corn.

ARMYWORM (Cirphis unipuncta Haw.)

Florida. F. S. Chamberlin (August 24): Several severe infestations of the armyworm have been reported in Gadsden County.

Wisconsin. E. L. Chambers (August 22): The armyworm outbreak, which was so serious last year and was expected to recur this year, has not been nearly so serious,

and apparently we are going to go through the season without any severe loss from this insect, since the corn is going into silos and the grain has been cut and threshed, the season being two weeks in advance of normal times.

Iowa. H. E. Jaques (August): The armyworm is moderately abundant in Audubon County and very abundant in Emmet and Worth Counties.

Nevada. Agr. News Service, Univ. of Nev. Agr. Ext. Div. #77-8-4, B. & A B-400 (First half of August): A large outbreak of armyworms was reported west of Pine Valley in Eureka County in June.

EUROPEAN CORN BORER (Pyrausta nubilalis Hon.)

Vermont. H. L. Bailey (August 22): The European corn borer is moderately abundant in the southwestern part of the State.

Connecticut. W. E. Britton (August 23): Gradually becoming more abundant throughout the State and causing commercial injury in New London County.

New York. N. Y. State Coll. of Agr., Weekly News Letter (August 22): The European corn borer is showing up in sweet corn plantings, but not to the extent of last year.

Wisconsin. E. L. Chambers (August 22): Found about two weeks ago in a small patch of sweet corn in the suburbs of Racine. The entire patch was immediately cut and fed to live stock, and no additional specimens have been found anywhere despite the careful survey for several miles around. No specimens of the corn borer have been taken anywhere else in Wisconsin and consequently the infested areas in Sheboygan and Manitowoc Counties which were discovered last August about this time have been completely wiped out by the thorough clean-up staged there this spring.

SOUTHERN CORN STALK BORER (Diatraea crambidoides Grote)

Virginia. H. G. Walker (August 25): The southern corn stalk borer is very abundant at Norfolk.

Kansas. H. R. Bryson (August 10): One report has been received from Allen of the southern corn stalk borer injuring corn.

LESSER CORN STALK BORER (Elasmopalpus lignosellus Zell.)

Mississippi. C. Lyle (August 23): Corn plants injured by E. lignosellus were received from Dublin on August 9. The sender indicated that these insects had seriously injured a field of young corn and were scattered over a field of old corn.

CORN LEAF APHID (Aphis maidis Fitch)

South Dakota. H. C. Severin (August 23): The corn leaf aphid is exceptionally abundant in Clark County. Some corn was badly damaged.

Nebraska. M. H. Swenk (July 20 to August 25): During the second week in August some trouble developed in Colfax County cornfields due to heavy attack by the corn leaf aphid.

CLOVER

CLOVER FLEA HOPPER (Halticus citri Uhler)

District of Columbia. W. R. Walton (August 4): H. citri on clover in Washington around the Library of Congress, also in northwestern section. Severe damage.

CLOVER LEAFHOPPER (Aceratagallia sanguinolenta Prov.)

Nevada. G. G. Schweis (August 17): The clover leafhopper was reported from Minden as numerous.

ALFALFA

ALFALFA WEEVIL (Hypera postica Gyll.)

Utah. G. F. Knowlton (August 1): Two alfalfa weevil larvae were taken in 500 sweeps of the insect net at LaSal.

Nevada. Agr. News Service, Univ. of Nev. Agr. Ext. Div., #77-8-4 B&AB-400 (1st half of August): The alfalfa weevil damage in Pershing County has not been sufficient to warrant control measures. Half as many additional acres have been dusted this year in the alfalfa weevil control campaign than in previous years at Fallon.

California. A. E. Michelbacher (August 23): The alfalfa weevil is scarce in Niles and moderately abundant in Pleasanton. In the area around Pleasanton the weevil is maintaining itself in about the same numbers as a month ago. Both larvae and adults can be found. Around Niles the weevil is increasing somewhat. In the field under observation 4 adults and 180 larvae were collected from 100 sweeps on August 22. The alfalfa in this field is about two-thirds grown. A month ago, July 22, at the time the alfalfa was being cut for the third time, 7 adults and 138 larvae were collected from 100 sweeps.

FIELD CRICKET (Gryllus assimilis Fab.)

South Dakota. H. C. Severin (August 23): The field cricket is extremely abundant in South Dakota, especially west of the Missouri River, where its principal damage is being done to alfalfa seed.

SOYBEAN

THRIPS (Thysanoptera)

Mississippi. C. Lyle (August 23): Following a complaint that soybeans were setting no fruit, A. L. Hamner found a very heavy infestation of thrips (undetermined) in a 50-acre field of beans at Muldon on August 20. It is believed the thrips were probably responsible for much of the trouble.

VELVET BEAN

VELVET BEAN CATERPILLAR (Anticarsia gemmatilis Hbn.)

Florida. A. N. Tissot (August 22): The velvet bean caterpillar has been very abundant in many fields in the country surrounding Gainesville. The insect has gone through one brood in this section, some of the adults emerging from the pupae as early as August 8.

F R U I T I N S E C T S

COTTON LEAF WORM (Alabama argillacea Hbn.)

Arkansas. D. Isely (August 23): Up to date I have no record of the occurrence of the cotton worm in Arkansas. This is, of course, unusually late.

South Carolina. F. Sherman (August 20): The cotton leaf worm is not yet noted in South Carolina for 1932.

APPLE

APPLE APHID (Aphis pomi DeG.)

New York. N. Y. State Coll. Agr., Weekly News Letter (August): Early in August the green apple aphid began to appear in large numbers throughout the eastern and western fruit regions. By the end of the month it was much more abundant than it has been for the past three years in Niagara County. It was also serious in Monroe County. (Abstract, J.A.H.)

CODLING MOTH (Carpocapsa pomonella L.)

Virginia. W. J. Schoene (August 22): The codling moth is expected to have a substantial third brood in the Roanoke district this year.

Georgia. C. H. Alden (August 26): The codling moth is moderately abundant at Cornelia. It is not so injurious as in 1931.

Indiana. G. E. Marshall (August 26): Adults of the second-brood codling moth emerged at Bedford August 17. The heavy rains which fell during the first part of the month seemed to slow down the activities of the second brood worms considerably in the southern half of the State.

Illinois. W. P. Flint (August 19): The codling moth has been more abundant and destructive in southern Illinois than at any time during the last ten years. The older apple orchards in that section are so heavily infested that in some cases the crop will not be picked.

Michigan. R. H. Pettit (August 22): Codling moths are very abundant.

Wisconsin. E. L. Chambers and assistants (August): The codling moth was reported as very abundant throughout the State. (Abstract J.A.H.)

Missouri. L. Haseman (August 25): In spite of our short apple crop and therefore a reduction in the number of sprays applied this year our growers are controlling the pest better than usual. Late worms are still entering the fruit.

Idaho. R. W. Haegele (August 24): Second-brood codling moth activity has been unusually great and prolonged during August, necessitating one or two extra sprays. Worm injury expected to be more than normal in the fruit district of southwestern Idaho.

Nevada. G. G. Schweis (August 17): The codling moth is very abundant in western Nevada.

Utah. G. F. Knowlton (August 17): The codling moth is from moderately to very abundant in northern Utah.

New Mexico. J. R. Eyer (July 31): Codling moths are very abundant. Third-generation adults are abundant now.

Washington and Idaho. Ortho News, Calif. Spray-Chemical Corporation (August 5): For the past few days, day temperatures have ranged close to 100 degrees with the result that second-brood moths have emerged in large numbers. Increased moth catches in bait pots were recorded in nearly all districts beginning July 31. In some districts the catch has been averaging from 20 to 50 moths per trap. This has been particularly true in those orchards in which great care was not taken to control the first brood. Evening temperatures have been ideal for a maximum deposit of eggs.

California. G. S. Hensill (August 17): The codling moth (second brood) is very abundant.

YELLOW-NECKED CATERPILLAR (Datana ministra Drury)

Illinois. W. P. Flint (August 19): Yellow-necked caterpillars, D. ministra, have been very abundant on apple; also on wild haw, wild crab, and oak, and in one case these insects were observed completely defoliating small elms.

Missouri. L. Haseman (July 27): Colonies of the yellow-necked apple worm are very abundant on young apple trees.

A LEAFHOPPER (Typhlocyba pomaria McAtee)

Connecticut. P. Garman (August 22): Second-brood nymph leafhoppers are emerging in various orchards.

New York. N. Y. State Coll. of Agr., Weekly News Letter (August): The second-brood T. pomaria began hatching in Ulster County on August 6, and newly hatched nymphs were first observed on August 10 in Essex County, and on August 7 in Dutchess County. During the third week in the month they increased to threatening numbers in the lower Hudson River Valley. (Abstract, J.A.H.)

LEAFHOPPERS (Cicadellidae)

New York. N. Y. State Coll. of Agr., Weekly News Letter (August 22): The second-brood of apple leafhoppers are appearing in considerable numbers in Onondaga County. In Niagara County these insects have done considerable injury to the foliage this season and are likely to speck the Greenings in many orchards.

Pennsylvania. H. E. Hodgkiss (July 26): Apple leafhoppers are very abundant.

APPLE REDBUG (Lygidea mendax Reut.)

New York. N. Y. State Coll of Agr., Weekly News Letter (August): Red bugs were reported as more plentiful this season than last year; at least 40 per cent of the orchards in Ulster County were badly infested, in most cases demanding control measures. (Abstract J.A.H.)

SAN JOSE SCALE (Aspidiotus perniciosus Comst.)

Delaware. L. A. Stearns (August 23): The San Jose scale is more abundant on fruit than in previous years.

Indiana. G. E. Marshall (August 26): A severe infestation of San Jose scale in an old apple orchard at Bedford was almost completely destroyed by a fungus disease during July and the early part of August.

Illinois. W. P. Flint (August 19): Owing to the fact that many peach and apple orchards did not receive a complete scale spray during the past season, the San Jose scale is now appearing in these poorly sprayed orchards and causing a moderate amount of damage to the fruit in apple orchards.

Michigan. R. Hutson (August 22): The San Jose scale is very abundant.

Wisconsin. E. L. Chambers (August 22): The San Jose scale has a number of new locations in the infested counties along Lake Michigan and the southeastern part of the State.

Mississippi. C. Lyle and assistants (August): The San Jose scale is generally abundant, as high as 90 per cent of the peach trees being killed where control is not practiced. (Abstract, J.A.H.)

APPLE MAGGOT (Rhagoletis pomonella Walsh)

New York. N. Y. State Coll. of Agr., Weekly News Letter (August): During the third week in August apple maggot flies were abundant in orchards in Ulster and Essex Counties. In Ulster County it was believed there would be more infested apples this year than last. (Abstract, J.A.H.)

APPLE CURCULIO (Tachypterellus quadrigibbus Say)

Vermont. H. L. Bailey (August 22): The apple curculio is reported as abundant in Oswell and vicinity.

New York. N. Y. State Coll of Agr., Weekly News Letter (August 15): New generation apple curculios are still emerging in Essex County. In some cases considerable injury is being done by this new brood.

COMMON RED SPIDER (Tetranychus telarius L.)

Washington and Idaho. Ortho News, Calif. Spray-Chemical Corporation (August 6): In the Yakima district, particularly in the lower valley, and in the Wenatchee district, red spiders and two spotted mites are nearly as troublesome as they were in 1931. Since the hot dry weather has made its appearance, the injurious effect of the spiders and mites has become more noticeable.

Nevada. Agr. News Service, Uni. of Nevada Agr. Ext. Div. (August): The red spider has been infesting strawberry patches at Reno.

EUROPEAN RED MITE (Paratetranychus pilosus C. & F.)

Connecticut. P. Garman (August 22): An abundance of natural enemies, such as thrips, have tended to keep down infestations of the European red mite.

New York. N. Y. State Coll. of Agr., Weekly News Letter (August): The European red mite did some bronzing of foliage in western New York early in the month to both prunes and Baldwin apples. (Abstract, J.A.H.)

PEACH

PEACH BORER (Aegeria exitiosa Say)

Pennsylvania. H. E. Hodgkiss (July 26): The peach borer is very abundant in central Pennsylvania, especially on young trees.
L. B. Smith (August 26): The peach borer is moderately abundant in some orchards in eastern Pennsylvania.

Georgia. O. I. Snapp (July 29): The infestation of Aegeria exitiosa is somewhat heavier than usual at Fort Valley which we attribute to the use of less paradichlorobenzene during recent years, as a result of economic conditions, and the mild winter. The first male of the season emerged on July 24 and the first female on July 27. Oviposition began on July 29. Moth emergence started a little earlier than usual which is perhaps due to the mild winter having permitted feeding by the larvae on more days during the winter months than usual, thereby shortening the larval feeding period.

Tennessee. H. G. Butler (July 27): Field emergence of peach borer adults was somewhat greater in July than in June. The peak of emergence usually occurs during the first part of September.
G. M. Bentley (August 17): The peach borer is moderately abundant in eastern Tennessee. These insects occur mostly in orchards which have been temporarily abandoned owing to low prices of fruit.

ORIENTAL FRUIT MOTH (Grapholitha molesta Busck)

Connecticut. P. Garman (August 22): The general infestation seems to be moving to the northern and eastern portions of the State.

New York. N. Y. State Coll. of Agr., Weekly News Letter (August 23): The oriental fruit moth has caused the early peaches to be very wormy, and has damaged fully half the crop of quinces in many orchards.

Delaware. L. A. Stearns (August 23): Oriental fruit moth infestation is light owing to heavy parasitization.

South Carolina. A. Lutken (August 24): Larvae of the oriental fruit moth were more abundant than usual in the crop of Elberta peaches. In some cases 4 to 10 per cent of the peaches were infested.

Georgia. W. H. Clarke (July 26): The oriental fruit moth is moderately to very abundant in middle Georgia. Some fruit injury in the upper half of the State.
C. H. Alden (August 26): The oriental fruit moth is moderately abundant; as high as 30 per cent of fruit infested at harvest, 1932.

Ohio. T. H. Parks (August 27): Injury to Elberta peaches now being picked at Columbus is much greater than last season. In one orchard with a light crop of peaches, the fruit infestation averages between 40 and 50 per cent.

Indiana. H. O. Deay (August 26): A progressive increase in the number of moths caught in bait traps was noted in the peach regions of the southern part of the State from the first of the month to August 19, according to reports from G. E. Marshall at Bedford and R. F. Sazama at Vincennes.

Tennessee. G. M. Bentley (August 17): Oriental fruit moth reported in Madison County. Abundant in orchards where peach is interplanted with apple. Larvae have been found injuring the fruit of apple.

Mississippi. C. Lyle and assistants (August): The oriental fruit moth was reported during August from Clay, Lafayette, Union, Tate, Lauderdale, Lowndes, Monroe, Chickasaw, and Tippah Counties. (Abstract, J.A.H.)

PLUM CURCULIO (Conotrachelus nenuphar Hbst.)

Connecticut. P. Garman (August 22): Much less damage to apples this year by the plum curculio, but considerable more to peaches. Good control secured in commercial orchards.

Georgia. C. H. Alden (August 26): The plum curculio is scarce at Cornelia. Very light infestation in fruit at harvest, 1932.

Ohio. E. W. Mendenhall (July 30): The plum curculio is very abundant on plum in the central counties.

Missouri. L. Haseman (July 27): This pest has continued to feed and oviposit longer than usual this summer.

Tennessee. H. G. Butler (July 27): No oviposition by first-brood curculio adults has been observed in the breeding cages at the insectary.

Mississippi. C. Lyle and assistants (August): The plum curculio is quite generally abundant throughout the State. In some cases practically every peach in an orchard was heavily infested. (Abstract, J.A.H.)

APRICOT

SHOT-HOLE BORER (Scolytus rugulosus Ratz.)

Utah. G. F. Knowlton (August 1): Shot-hole borers are causing severe damage to some of the apricot orchards in the Brigham, Willard, Perry section of Box Elder County.

QUINCE

QUINCE LACEBUG (Corythucha cydoniae Fitch)

Michigan. R. Hutson (August 18): The lacebug is abundant enough to necessitate control measures on 2 acres of quince.

PLUM

SNOWY TREE CRICKET (Oecanthus niveus DeG.)

Idaho. R. W. Haegele (August 24): Snowy tree cricket populations are on the increase in many prune orchards of southwestern Idaho, necessitating dusting or spraying in a few orchards.

RASPBERRY

RASPBERRY CANE BORER (Oberea bimaculata Oliv.)

Vermont. H. L. Bailey (August 22): Reports of damage by the raspberry cane borer have been received from many parts of the State.

Pennsylvania. W. E. Blauvelt (July 14): Several adult specimens of O. bimaculata have been received. They were reported as attacking raspberry and roses.

Minnesota. A. G. Ruggles (August 23): Several reports have been received of this insect doing severe damage to red raspberries in Ramsey and Hennepin Counties.

GRAPE

GRAPE LEAFHOPPER (Erythroneura comes Say)

Pennsylvania. C. A. Thomas (August 24): Grape leafhoppers have been common and fairly injurious in several vineyards in Chester County.

Ohio. E. W. Mendenhall (July 30): The grape leafhopper is quite bad on grape leaves.

South Dakota. H. C. Severin (August 23): Leafhoppers are doing much damage to woodbine and grape over the State.

Nebraska. M. H. Swenk (July 20 to August 25): Injury to grape and woodbine leaves by the grape leafhopper continued to be reported during the period here covered, the reports during August coming chiefly from south-central Nebraska.

Colorado. G. M. List (August 25): Many inquiries have been received in regard to the grape leafhopper on grapes and ornamental vines such as the Virginia creeper.

Utah. G. F. Knowlton (August 15): Grape leafhoppers are now causing serious damage to Virginia creeper and grapes in parts of northern Utah.

GRAPE PHYLLOXERA (Phylloxera vitifoliae Fitch)

Ohio. E. W. Mendenhall (July 28): I find the grape phylloxera very bad on the Clinton variety of grapes on home plantings in Lithopolis. The leaves show a great deal of injury.

CURRANT

CURRANT APHID (Myzus ribis L.)

Montana. A. L. Strand (August 17): Currant aphids are very abundant.

PECAN

HICKORY SHUCK WORM (Laspeyresia caryana Fitch)

Georgia. J. B. Gill (August 25): The pecan shuck worm has been infesting green nuts in various localities in Georgia.

Mississippi. C. Lyle (August 23): A small percentage of pecan drops received recently from Hollandale and Meridian showed infestation.
C. Lyle and assistants (August): Shuck worms are moderately abundant at Ocean Springs, Jackson County.

PECAN CASE BEARER (Mineola juglandis LeB.)

Georgia. J. B. Gill (August 25): There has occurred a heavy infestation of the pecan leaf case bearer in pecan orchards of the southern portion of Georgia.

FALL WEBWORM (Hyphantria cunea Drury)

Georgia. J. B. Gill (August 25): The second brood of the fall webworm has caused some injury to foliage of pecan orchards in scattered localities in Georgia.

WALNUT CATERPILLAR (Datana integerrima G. & R.)

Georgia. J. B. Gill (August 25): Colonies of the walnut caterpillar are not so prevalent in pecan orchards of Georgia as in some years.

Florida. A. N. Tissot (August 22): The walnut caterpillar is partially defoliating many pecan trees in the southern part of the pecan section of Florida.

CITRUS

CITRUS WHITEFLY (Dialeurodes citri Riley & How.)

Georgia. J. B. Gill (August 25): The citrus whitefly is moderately abundant in southern Georgia on Satsuma orange trees and ornamentals.

Florida. A. N. Tissot (August 28): The citrus whitefly is moderately abundant in scattered localities.

CITRICOLA SCALE (Coccus pseudomagnoliarum Kuwana)

California. R. Bogue (August 23): Orange growers in the vicinity of Redlands have been having considerable trouble from the citricola scale. The scale has been very thick in this district and the growers feel that the weather has been responsible. Extremely hot weather has not been sufficiently plentiful to check the newly hatched scale.

FIG

A FLOWER BEETLE (Euphoria sepulchralis Fab.)

Mississippi. C. Lyle (August 23): Adults of Euphoria sepulchralis were found feeding in moderate numbers on ripe figs at Trebloc on July 30.

T R U C K - C R O P I N S E C T S

FALSE CHINCH BUG (Nysius ericae Schill.)

Utah. G. F. Knowlton (August 1): False chinch bugs have been damaging wheat and truck crops in scattered localities throughout Utah.

Nevada. G. G. Schweis (August 17): The false chinch bugs in migrating from weeds are causing much annoyance to housewives at Reno and Las Vegas.

BLISTER BEETLES (Meloidae)

Connecticut. W. E. Britton (August 22): Epicauta cinerea var. marginata Fab. are generally more abundant than usual. Reported at Bethany, Stafford Springs, Guilford, West Haven, and Wethersfield attacking potato, tomato, clematis, beets, and various garden plants.

Pennsylvania. H. E. Hodgkiss (July 26): E. pennsylvanica DeG. reported abundant in northeastern area. Identified from specimens.
C. A. Thomas (August 24): Blister beetles, E. vittata Fab. and E. marginata Fab. have been very abundant and destructive in southeastern Pennsylvania, where they have destroyed leaves and fruit of tomato, leaves of beet, cow-beet, Swiss chard, etc. The small black E. pennsylvanica was found injuring gladiolus leaves and flowers near Coatesville.

Delaware. L. A. Stearns (August 23): Blister beetle (E. marginata) on potatoes in Yorklyn August 1. E. vittata on potatoes in Ogleton August 8.

Virginia. H. G. Walker and L. D. Anderson (August 26): The blister beetles E. marginata [illegible] and E. vittata are causing considerable damage to tomatoes in certain areas of tidewater Virginia.

Indiana. H. O. Deay (August 26): Blister beetles continued to be abundant throughout the State to potatoes and tomatoes but were diminishing in numbers toward the latter part of the month.

Illinois. J. H. Bigger (August 16): Blister beetles, mostly E. vittata, were very abundant during July and early August.

North Dakota. J. A. Munro and assistants (August): Blister beetles are very abundant in Kidder, Adams, and Morton Counties. (Abstract, J.A.H.)

South Dakota. H. C. Severin (August 23): Blister beetles of many species are general over the State. Many crops have been attacked and some bush and shade plants defoliated.

Missouri. L. Haseman (August 25): Blister beetles have attracted much attention in the northern half of the State during the month and they are still abundant (August 26) in gardens.

Nebraska. M. H. Swenk (July 20 to August 25): The black blister beetle (E. pennsylvanica) was reported damaging tomato plants in Johnson County, and the silks and tips of corn ears in Thurston County during August.

Kansas. H. R. Bryson (August 17): Blister beetles appear to be more abundant than usual in Kansas this year. A number of reports note the beetles injuring garden crops, particularly potatoes and tomatoes. Observations in Jewell County showed them more injurious to potatoes than the Colorado potato beetle.

Arkansas. D. Isely (August 23): Blister beetles have been unusually abundant, local outbreaks apparently occurring in all parts of Arkansas.

Mississippi. C. Lyle (August 23): Blister beetles belonging to the species E. trichrus Pall. were reported as causing medium injury to dahlias at Starkville on July 30.

A SOLDIER BEETLE (Tegrodera erosa Lec.)

California. R. Bogue (August 23): August 1, Victorville, a heavy infestation of the soldier beetle T. erosa has done considerable damage to flowers and vegetation around Baldy Mesa. This pest apparently has come in from the southeast and has not been noticed before in this vicinity.

POTATOES

POTATO LEAFHOPPER (Empoasca fabae Harr.)

Vermont. H. L. Bailey (August 22): The potato leafhopper is very abundant in the southern half of the State.

Connecticut. W. E. Britton (August 23): The potato leafhopper is scarce.

New York. N. Y. State Coll. of Agr., Weekly News Letter (August): Potato leafhoppers began appearing in large numbers in western New York during the first week in the month. Hopperburn became quite noticeable in Genesee and Orleans Counties. By the third week in the month the problem was quite serious in Onondaga, Orleans, Genesee, and southern Monroe Counties. (Abstract, J.A.H.)

Pennsylvania. L. B. Smith (August 26): The potato leafhopper is very abundant, locally, in Luzerne County.

Virginia. H. G. Walker (August 25): The potato leafhopper is moderately abundant at Norfolk and the Eastern Shore of Virginia.

Ohio. E. W. Mendenhall (July 30): The potato leafhopper is very abundant on potatoes in the central counties.

Wisconsin. E. L. Chambers and assistants (August): This insect was reported during the month in large numbers from practically all counties. (Abstract, J.A.H.)

Minnesota. A. G. Ruggles and assistants (August): The potato leafhopper is very abundant, reports of heavy infestations coming from Sherburne, Morrison, Itasca, Martin, Dakota, Winona, Chippewa, Lac Qui Parle, Luke, and Aitkin Counties. (Abstract, J. A. H.)

COLORADO POTATO BEETLE (Leptinotarsa decemlineata Say)

Pennsylvania. H. E. Hodgkiss (July 26): The Colorado potato beetle is very abundant, generally over the State.

Ohio. E. W. Mendenhall (July 30): The Colorado potato beetle is very abundant on potatoes.

Indiana. H. O. Deay (August 26): The potato bug destroyer (Perillus bioculatus Fab.) was reported from several localities in the southern part of the State where it had been observed to be feeding on the larvae of the Mexican bean beetle as well as Colorado potato beetle larvae.

Wisconsin. E. L. Chambers and assistants (August): The Colorado potato beetle is reported as quite generally abundant throughout the State. (Abstract, J.A.H.)

Minnesota. A. G. Ruggles and assistants (August): The Colorado potato beetle is very abundant, reports of heavy infestations coming from Lake, Martin, Kittson, Nicollet, Hennepin, St. Louis, and Aitkin Counties. (Abstract, J.A.H.)

Missouri. L. Haseman (August 25): A few larvae of the Colorado potato beetle and a considerable sprinkle of adults on potatoes.

POTATO FLEA BEETLE (Epitrix cucumeris Harr.)

Connecticut. N. Turner (July 22): Emerging adults are causing serious injury to Green mountain potatoes in the southern part of the State. Unsprayed vines are seriously affected.

New York. N. Y. State Coll. of Agr., Weekly News Letter (August): During the third week in August the second brood of the potato flea beetle began showing up in large numbers in Onondaga and Orleans Counties. (Abstract, J.A.H.)

New Jersey. R. C. Burdette (July 25 & 26): Flea beetles continue to be very numerous on potatoes.

Ohio. E. W. Mendenhall (July 30): The potato flea beetle is quite bad on potatoes.

South Dakota. H. C. Severin (August 23): The potato flea beetle is more abundant than usual; most damage done to potato and tomato.

Colorado. G. M. List (August 25): The potato flea beetle is more numerous than for a number of years, especially in the Greeley and Fort Morgan sections.

POTATO STALK BORER (Trichobaris trinotata Say)

Pennsylvania. C. A. Thomas (August 24): The potato stalk weevil has caused some injury to cobblers and other early potatoes in Chester County, while adjacent fields of russets and other late varieties were hardly touched by them. A small amount of parasitism by unidentified hymenopterons was found.

POTATO PSYLLID (Paratrioza cockerelli Sulc)

Colorado. G. M. List (August 25): The tomato psyllid is more numerous than usual on potatoes and is being found throughout the State. The early crop of potatoes was almost a total loss in the Gilcrest and Greeley sections from the psyllid yellows. This condition is developing more on late potatoes than we have ever seen before.

Utah. G. F. Knowlton (August 15): The potato psyllid has been found to be generally distributed throughout the potato-growing sections of Utah, and psyllid yellows has been found to occur on potatoes in most of the areas where Paratrioza cockerelli has been present in abundance.

TOBACCO WORM (Phlegethontius quinquemaculata Haworth)

New Jersey. T. J. Headlee and R. C. Burdette (August 17 and 18): The green tomato hornworm is very numerous in all tomato fields visited in the southern portion of the State. Egg laying is also taking place in Bergen County. Eggs are generally very numerous and quite a few at this time are showing parasitism. The young worms range in size from those newly hatched to approximately 1-1/2 inches. In some fields they are unusually abundant and unless spraying takes place immediately serious damage will result. (August 24 and 25): The green tomato hornworm is now in many cases more than half grown. Serious damage is to be expected in fields where no spraying or dusting has been done. Only one field has shown any parasitism. This situation should be carefully followed and action taken where it is deemed necessary.

Nebraska. M. H. Swenk (July 20 to August 25): The larvae were quite troublesome on tomatoes in several localities in southeastern Nebraska during the last week in July.

Utah. G. F. Knowlton (August 1): The tomato worms are damaging potatoes at Price.

POTATO APHID (Illinoia solanifolii Ashm.)

New Jersey. T. J. Headlee and R. C. Burdette (August 2 and 4): The pink and green aphid continues to be present in large numbers.

Pennsylvania. H. E. Hodgkiss (July 26): I. solanifolii on early potatoes only. Abundant. Peak of infestation came at time tubers were being harvested.

EGGPLANT

EGGPLANT FLEA BEETLE (Epitrix fuscula Crotch)

Indiana. H. O. Deay (August 26): The eggplant flea beetle has been abundant throughout the State.

EGGPLANT LACEBUG (Gargaphia solani Heid.)

New Jersey. T. J. Headlee and R. C. Burdette (July 25 and 26): Lacebugs on eggplant are rather abundant, all stages being present in the fields.

BEANS

MEXICAN BEAN BEETLE (Epilachna corrupta Muls.)

Maine. H. B. Peirson (August 8): First report of the Mexican bean beetle received from North Berwick, also observed in Alfred, Sanford, Waterboro, Bar Mills, Kittery, and Parsonfield.
C. R. Phipps (August 22): The Mexican bean beetle is moderately abundant in western Maine. First records for York and Cumberland Counties.

Vermont. H. L. Bailey (August 22): Mexican bean beetles were found in Bennington and Rutland Counties as far north as Wallingford. Previously not found outside Windham County.

Connecticut. N. Turner (July 22): First-generation adults and second-generation larvae are common throughout the State. The infestation seems more severe in the southern part of the State. Unsprayed beans have been defoliated.

New York. N. Y. State Coll. of Agr., Weekly News Letter (August): On the 29th of July larvae of the Mexican bean beetle were found for the first time in Genesee County at Batavia. During the first week in August it wiped out many bean patches in Ulster County. (Abstract, J. A. H.)

Pennsylvania. C. A. Thomas (August 24): The Mexican bean beetle continued to be destructive throughout southeastern Pennsylvania during July.

New Jersey. T. J. Headlee and R. C. Burdette (August 2 and 4): The Mexican bean beetle continues to be very numerous and larvae of the second brood are more than half grown. Bush lima beans are showing the greatest injury.

Delaware. L. A. Stearns (August 23): Infestation generally scarce.

Virginia. H. G. Walker (August 25): Moderately abundant in Norfolk and Eastern Shore of Virginia.

South Carolina. F. Sherman (August 20): Moderately abundant over the State as a whole. Somewhat above average.
A. Luthen (August 24): Very abundant generally.

Georgia. C. H. Alden (August 26): Moderately abundant at Cornelia. Considerable injury to late snap beans.

Ohio. E. W. Mendenhall (July 30): The Mexican bean beetle is worse than it has ever been on garden beans and has caused a great loss in central and southern Ohio. The lima and string beans have suffered the most. The beetle seems to be hard to control.

Indiana. H. O. Deay (August 26): Not so many inquiries in regard to the Mexican bean beetle were received in August as in July. A new generation commenced to appear at Lafayette about August 17 and had destroyed many patches of backyard beans by August 26.

Michigan. R. Hutson (August 22): Moderately abundant in southern counties on snap beans.

Nebraska. M. H. Swenk (July 20 to August 25): The bean ladybird was found attacking beans during the last week in July at Kimball County, and Bridgeport, Morrill County. The damage was not extensive or severe.

Tennessee. G. M. Bentley (August 17): Moderately abundant in eastern Tennessee.

Mississippi. C. Lyle and assistants (August): The Mexican bean beetle was very abundant in Tishomingo, East Monroe, and Alcorn Counties. (Abstract, J.A.H.)

Colorado. G. M. List (August 25): The Mexican bean beetle is less abundant than usual in the western half and more abundant in the eastern half of the State.

New Mexico. J. R. Eyer (July 31): Moderately abundant.

BEAN LEAF BEETLE (Cerotoma trifurcata Forst.)

Mississippi. C. Lyle and assistants (August): Late bunch beans in Wiggins were severely injured by the bean leaf beetle.

LESSER CORN STALK BORER (Elasmopalpus lignosellus Zell.)

North Carolina. R. W. Leiby (August 3): Practically destroyed one acre of young bush string beans in Thomasville by boring into the stalks during the week of July 15.

South Carolina. J. N. Tenhet (August 5): This insect is damaging beans in one garden in Fairfax.

CABBAGE

IMPORTED CABBAGE WORM (Ascia rapae L.)

New York. N. Y. State Coll. of Agr., Weekly News Letter (August): Early in August the imported cabbage worm became numerous in many plantings in the western part of the State. (Abstract, J.A.H.)

New Jersey. T. J. Headlee and R. C. Burdette (August 2, 4, 8, and 9): Cabbage is being severely injured by the imported cabbage worm. The imported cabbage worm is a little more numerous than last week.

Indiana. H. O. Deay (August 26): The imported cabbage worm was very abundant throughout the State during the first half of the month.

Wisconsin. E. L. Chambers and assistants (August): The cabbage worm continues to be extremely troublesome throughout the greater part of the State. (Abstract, J.A.H.)

Minnesota. A. G. Ruggles and assistants (August): Cabbage worms were reported as very abundant from Dakota, Pipestone, Morrison, Martin, Kittson, Winona, Lac Qui Parle, and Aitkin Counties. (Abstract, J.A.H.)

North Dakota. J. A. Munro and assistants (August): Reported as very abundant from Walsh and Dickey Counties. (Abstract, J.A.H.)

South Dakota. H. C. Severin (August 23): The imported cabbage worm is much more abundant over South Dakota than usual and the damage is correspondingly more severe.

Iowa. H. E. Jaques (August): Very abundant in the northwestern corner of the State.

Nebraska. M. H. Swenk (July 20 to August 25): The cabbage worm, which was unusually troublesome in July, became very much less so during August.

Tennessee. G. M. Bentley (August 17): Very abundant in Nashville, Davidson County; above average for season.

CABBAGE LOOPER (Autographa brassicae Riley)

New Jersey. T. J. Headlee and R. C. Burdette (August 2, 4, 8, and 9): Cabbage is being severely injured by the cabbage looper. They are a little more numerous than last week.

Virginia. H. G. Walker and L. D. Anderson (August 26): The cabbage looper is causing considerable damage to early cabbage in the Norfolk area.

South Dakota. H. C. Severin (August 23): Much more abundant over South Dakota than usual and the damage is correspondingly more severe.

Colorado. G. M. List (August 25): The cabbage looper continues to be bad in some of the head-lettuce-growing sections, especially in the San Luis Valley.

CABBAGE WEBWORM (Hellula undalis Fab.)

Virginia. H. G. Walker and L. D. Anderson (August 26): The cabbage webworm is present in the Norfolk area again this year on cruciferous crops.

South Carolina. A. Lutken (August 24): Cabbage webworms are causing losses of collards in many gardens.

DIAMOND-BACK MOTH (Plutella maculipennis Curtis)

New Jersey. T. J. Headlee and R. C. Burdette (August): Cabbage is being severely injured by the diamond-back moth, August 2 and 4. (August 8 and 9): They are a little more numerous than last week.

CABBAGE APHID (Brevicoryne brassicae L.)

New York. N. Y. State Coll. of Agr., Weekly News Letter (August): Early in August, the cabbage aphid did serious damage in parts of western New York. (Abstract, J.A.H.)

Ohio. T. H. Parks (August 15): Cabbage aphid has done serious damage to cabbage grown for kraut in Erie County.

Tennessee. G. M. Bentley (August 17): The cabbage aphid is very abundant in Davidson County, Nashville. Above average for season.

HARLEQUIN BUG (Murgantia histrionica Hahn)

District of Columbia. E. R. King (August 24): Four harlequin bugs were found feeding on a spider plant in Potomac Heights.

Virginia. H. B. Derr (August 16): The harlequin bug is the most destructive insect we have this year.
W. J. Schoene (August 22): During the past summer the harlequin bug has been reported from many sections of the State, causing serious injury to various cruciferous crops. This pest has been more numerous than for many years.
H. G. Walker and L. D. Anderson (August 26): The harlequin bug is seriously injuring young kale and other cruciferous crops in Tidewater. Large numbers of these bugs have been breeding in old seed kale fields, from which they are migrating to other fields. Several fields of young kale have been completely destroyed by migrating nymphs and others have been more or less severely injured. In some places the nymphs have migrated from one-fourth to one-half of a mile, crossing a creosote barrier as if there were nothing there. In migrating from field to field the nymphs have caused some injury to corn. A large number of nymphs have become adults during the past week and these are now flying around and causing damage over a much wider area. A small hymenopterous egg parasite (which has been sent to Dr. Morrison for identification) is quite common in some fields. As high as 30 per cent of the eggs collected in some fields have been found to be parasitized by this parasite.

North Carolina. R. W. Leiby (August 3): This insect is being reported as doing its usual, if not more than average, damage to cabbage and collards.

Indiana. H. O. Deay (August 26): The harlequin bug seems to be very serious in the southern part of the State, as several inquiries in regard to its control were received from there between August 15 and 22.

Illinois. W. P. Flint (August 19): There have been an unusually large number of reports of this insect. These have come in from many points in the southern half of the State, the farthest coming from Schuyler County, which is almost exactly half way up the State, about on the line with the city of Indianapolis.

Missouri. L. Haseman (August 25): Still causing damage to cabbage and related crops at Columbia. Adults are laying eggs at present (August 26).

Tennessee. G. M. Bentley (August 17): The harlequin bug is moderately abundant in Montgomery County and eastern Tennessee.

Colorado. G. M. List (August 25): The harlequin bug spread farther north this year than usual. It has been taken in considerable numbers in Fort Collins and as far north as Sterlin. The heaviest loss has occurred in the cauliflower-growing sections in the Arkansas Valley east of Pueblo.

New Mexico. J. R. Eyer (July 31): Very abundant.

CUCUMBER

STRIPED CUCUMBER BEETLE (Diabrotica vittata Fab.)

Pennsylvania. L. B. Smith (August 26): The striped cucumber beetle is moderately abundant in southeastern counties; rather severe damage from larvae to cantaloupes is being done.
H. E. Hodgkiss (July 26): Very abundant; damage unusually severe.

Ohio. T. H. Parks (August): More than the usual number of complaints have been made about larvae of this beetle boring into and throughout stems of melon and cucumber plants. They have caused many plants to die before the melons ripened.

Wisconsin. E. L. Chambers and assistants (August): This insect was very abundant throughout the entire State. (Abstract, J.A.H.)

Minnesota. A. G. Ruggles and assistants (August): This insect is very abundant in Hennepin and Dakota Counties; and is moderately abundant throughout the remainder of the State. (Abstract, J.A.H.)

Iowa. H. E. Jaques (August): This insect is very abundant in the southwestern quarter of the State.

Tennessee. G. M. Bentley (August 17): The striped cucumber beetle is moderately abundant in eastern Tennessee; found injuring dahlias as well as the cucurbits.

PICKLE WORM (Diaphania nitidalis Stoll)

Georgia. O. I. Snapp (July 25 and 30): The pickle worm is much more abundant this year than usual. 80 per cent of the honeydew melons in a field at Gray were infested. Cantaloupes at Fort Valley were also heavily infested.

WESTERN STRIPED CUCUMBER BEETLE (Diabrotica trivittata Mann.)

New Mexico. J. R. Eyer (July 31): The western striped cucumber beetle is very abundant. Very injurious on field corn.

MELON APHID (Aphis gossypii Glov.)

South Carolina. J. N. Tenhet (August 3): Late watermelons are being seriously injured in some fields in Fairfax.

South Dakota. H. C. Severin (August 23): The usual number of complaints have been received of the melon aphid over the State. Serious damage done to melon and cucumber.

Nebraska. M. H. Swenk (July 20 to August 25): The melon aphid continued to cause trouble on cucumbers and melons during August, though less than it did in July.

SPOTTED CUCUMBER BEETLE (Diabrotica duodecimpunctata Fab.)

Nebraska. M. H. Swenk (July 20 to August 25): Continued to be troublesome in central and western Nebraska on cucurbits in all parts of the State during the period here covered.

Kansas. H. R. Bryson (August 15): Very abundant this year, at least over the eastern half of the State, but little visible damage has been in evidence.

Tennessee. G. M. Bentley (August 17): Moderately abundant in eastern Tennessee, found injuring dahlias.

SQUASH

SQUASH BUG (Anasa tristis DeG.)

Vermont. H. L. Bailey (August 22): Reported generally abundant.

Pennsylvania. J. R. Stear (August 23): Very abundant again this year.

Georgia. O. I. Snapp (July 27): This insect caused considerable injury to watermelons at Byron. Growers reduced the population by hand picking.

Nebraska. M. H. Swenk (July 20 to August 25): Continued during August to be unusually troublesome on cucurbits, especially squashes, in all parts of the State.

Kansas. H. R. Bryson (August 18): Squash bugs are very abundant at Manhattan, but owing to the frequent rains and ideal growing weather injury has not been severe.

Oklahoma. C. E. Sanborn (August 24): Very abundant.

New Mexico. J. R. Eyer (July 31): The squash bug is very abundant.

ONION

TARNISHED PLANT BUG (Lygus pratensis L.)

Michigan. R. Hutson (August 5): Eight acres of onion seed were destroyed in Decatur by this insect.

THRIPS (Thysanoptera)

New York. N. Y. State Coll. of Agr., Weekly News Letter (August 1): Thrips are causing a lot of damage in several onion fields and also in gladiolus.

SWEETPOTATO

GOLD BUGS (Metriona sp.)

New Jersey. T. J. Headlee and R. C. Burdette (July 25 and 26): Gold bugs (Cassida sp.) continue to be serious on sweetpotatoes.

Mississippi. C. Lyle and assistants (August): Damage to sweetpotato leaves noticed, caused by tortoise beetles (Chelymorpha cassidea Fab.) at Booneville, Prentiss County, August 18.
C. Lyle (August 23): Tortoise beetles representing two species, C. cassidea and Metriona bivittata Say, were reported quite abundant on sweetpotato plants at Kosciusko on July 22.

PEPPER

PEPPER WEEVIL (Anthonomus eugenii Cano)

California. J. C. Elmore (August 22): Although infestations were apparent on the same date as for the preceding season, the weevils are actucally only 5 per cent as abundant as they were last year. Three fields are rather heavily infested but are known to have been infested from protected nightshade patches where the weevils have survived the winter. The general light infestation this year is due to the destruction of buds and pods early the preceding fall by unusually heavy weevil infestations so that only adult weevils were able to enter the winter. Heavy infestations are usually possible because adults are able to continue emerging from late pods until February or March, or are able to survive on peppers or nightshade when either are not destroyed by artificial or natural means. Abnormally low temperatures during December and January caused a heavy mortality of both weevils and host plants. Low temperatures also retarded egg laying until March 29, whereas egg laying began February 14 the previous year.

PEPPER MAGGOT (Spilographa electa Say)

New Jersey. T. J. Headlee and R. C. Burdette (July 25 and 27): The pepper maggot fly is still abundant and peper fields show heavy egg infestation.

STRAWBERRY

WHITE GRUBS (Phyllophaga spp.)

Pennsylvania. C. A. Thomas (August 24): Numerous complaints have been received during July and early August of injury to strawberry plants by white grubs which chewed off the plants at the crown.

BOXELDER BUG (Leptocorus trivittatus Say)

Michigan. R. Hutson (August 18): The boxelder bug destroyed a planting at St. Joseph of everbearing strawberries. Eggs, nymphs, and adults present in great numbers.

STRAWBERRY LEAF-ROLLER (Ancylis comptana Froel.)

Missouri. L. Haseman (August 25): Strawberry leaf-rollers are abundant in some fields in the southwestern part of the State and in central Missouri.

BEET

BEET LEAFHOPPER (Eutettix tenellus Bak.)

Utah. G. F. Knowlton (August 1): Some curly-top is appearing on tomatoes, 30 per cent being observed in one garden at Blanding. (August 15): Beet leafhoppers have been less abundant in most northern Utah sugar beet fields than during the past few seasons, and curly-top damage has been rather light in most beet-growing districts up to the present time.

New Mexico. J. R. Eyer (July 31): Beet leafhoppers are scarce. Failure of desert host plants has reduced population this season.

BEET WEBWORM (Loxostege sticticalis L.)

Montana. A. L. Strand (August 17): The second generation has been of very minor if any importance, possibly because the first generation was delayed.

Colorado. G. M. List (August 25): The second brood of sugar beet webworm larvae is quite numerous in the eastern counties of the State. It is being found necessary to spray many of the sugar beets and in some cases the worms that are migrating from Russian thistle and other weeds are destroying the silks on corn before pollination.

Idaho. R. W. Haegele (August 24): A general outbreak was reported throughout counties of eastern Idaho during July, with considerable damage in several widely scattered districts. The outbreak has been rapidly on the decrease in August.

Utah. G. F. Knowlton (August 1): Seriously damaged sugar beets and alfalfa occur in many parts of Utah, but most of the larvae have now matured and little damage has been reported during the past week.

F O R E S T A N D S H A D E - T R E E I N S E C T S

BAGWORM (Thyridopteryx ephemeraeformis Haw.)

New Jersey. R. B. Lott (August 17): Entire defoliation of quite large yellow locust trees near Freehold.

Pennsylvania. C. A. Thomas (August 24): Bagworms caused considerable injury during July to arborvitae, blue spruce, Norway and Japanese maples, and other trees and shrubs in southeastern Pennsylvania. (August 1): Bagworms are now migrating to other trees, presumably for pupation.

Indiana. H. O. Deay (August 26): Bagworms were received from Sullivan, August 19, where they were seriously injuring ornamental plantings of blue spruce.

Minnesota. A. G. Ruggles (August 23): Bagworms are more abundant than usual this year on arborvitae. The past few years the weather has been very mild during the winter months and infestation by this insect is building up. I believe the insect would not stand an old-fashioned Minnesota winter.

Nebraska. M. H. Swenk (July 20 to August 25): A report of damage to evergreen by the bagworm was received from Richardson County the second week in August.

Mississippi. C. Lyle (August 23): Heavy infestations on arborvitae have been reported recently from Amory, Vicksburg, and Pine Valley.

GIPSY MOTH (Porthetria dispar L.)

Pennsylvania. Office of Information, Press Service, U.S.D.A. (August 8): The gipsy moth was discovered late in July in northeastern Pennsylvania near Pittston in Luzerne County. This insect was found in an outlying district back in the mountains, consisting principally of cut-over land. Information at hand indicates that an area about 8 miles long and 4 miles wide has already been found to be involved. The chances are that when the survey is completed it will be found that a considerably larger area is infested. The extent of the infestation indicates that the gipsy moth has been present in this region for a period of possibly 15 years.

FALL WEBWORM (Hyphantria cunea Drury)

Maine. H. B. Peirson (August 12): Fall webworms are very prevalent on elm and willow in the vicinity of Augusta and Georgetown.

Connecticut. W. E. Britton (August 23): Apparently this insect is less abundant than in 1931. Attacking shade, fruit, and forest trees.

Pennsylvania. C. A. Thomas (August 24): Fall webworms are now abundant on wild cherry, apple, hickory, walnut, and a number of other tree species, and have entirely defoliated some walnuts and cherries.

Delaware. L. A. Stearns (August 23): The fall webworm is noticeably abundant in northern Delaware--less abundant, however, than at this date last year.

Virginia. C. R. Willey (August): Fall webworms are very abundant in forests of swampy sections from Richmond to Newport News and from Petersburg to Suffolk and Norfolk.

Ohio. T. H. Parks (August 27): This insect is very abundant in Ohio and is attacking valuable shade trees in the cities. The webs are so abundant in some trees as to make cutting them out or burning impossible.

A LEAFCUTTER BEE (Megachile sp.)

Montana. A. L. Strand (August 17): A leaf cutter bee, Megachile sp., is very injurious to shade trees in north-central Montana.

CARPENTER WORM (Prionoxystus robiniae Peck)

South Dalota. H. C. Severin (August 23): More complaints than usual have been received of the carpenter worm, P. robiniae.

TWIG GIRDLER (Oncideres cingulatus Say)

Virginia. H. G. Walker & L. D. Anderson (August 26): The twig girdler, which caused considerable damage to various trees in the Norfolk area last year, is just beginning to emerge from pupation.

BIRCH

BIRCH LEAF-MINING SAWFLY (Phyllotoma nemorata Fall.)

Maine. H. B. Peirson (August 18): Birch sawfly leaf miner outbreaks have been very heavy through the central part of the State.

BRONZE BIRCH BORER (Agrilus anxius Gory)

Ohio. E. W. Mendenhall (August 24): The bronze birch borer is very bad in the birch in Dayton and Springfield. There are a good many planted in Dayton and Oakwood.

CATALPA

CATALPA SPHINX (Ceratomia catalpae Bdv.)

Pennsylvania. J. N. Knull (August 20): The catalpa sphinx is abundant at Mont Alto this year, attacking catalpa.

New Jersey. Courier-Post, Camden, N. J. (August 17): These worms have denuded large catalpa trees of their foliage, making large sections as bare as in winter at Fairview.

Indiana. H. O. Deay (August 26): The second generation of catalpa worms commenced to appear at Lafayette August 14, and in the northern part of the State a few days later.

ELM

ELM LEAF BEETLE (Galerucella xanthomelaena Schr.)

Maine. H. B. Peirson (August): Severe outbreaks by the elm leaf beetle in the vicinity of Bath and Portland on elm, August 10.

-New England and New York. E. P. Felt (August 13): Elm leaf beetle injury has been reported as very serious in the Hudson Valley north to Lake George and up to Rutland, Vt., in southeastern New York especially Monroe, Warwick, Goshen, Newburgh, Kingston, and Catskill.
W. E. Britton (August 22): Not so destructive as in 1931 on unsprayed trees. Sprayed trees in better condition than in 1931. Reported at Hamden, Southington, Middletown, Norfolk, Waterbury, Windsor, and East Windsor, Conn.

Tennessee. G. M. Bentley (August 17): The elm leaf beetle reported at Knoxville. First finding (two locations) in city. Occurred in Maury County several years ago.

Idaho. R. W. Haegele (August 24): A general infestation on cork-bark elms by the elm leaf beetle discovered in Parma, Canyon County, on August 22. This is the second infestation of this insect to be discovered in Idaho, the first being in 1931 at Nampa, 25 miles southeast in the same county.

California. E. O. Essig (August 17): The elm leaf beetle has been quite injurious to elms in the Yosemite Valley during July and August, 1932. Some trees nearly defoliated.

ELM LACEBUG (Corythucha pallida ulmi O. & D.)

Connecticut. E. P. Felt (August 13): The elm lacebug is extremely abundant on American elms growing in wild or weedy areas between Kent and Canaan, a distance of some 40 miles. The insects produce a somewhat general, characteristic, yellowish discoloration of the leave, frequently affecting a considerable proportion of the foliage. This insect appears to be very limited and to date has not been observed upon smoothly clipped lawns.

FIR

FIR BARK LOUSE (Dreyfusia picea Ratz.)

Maine. H. D. Peirson (August 10): Outbreaks of this insect are continually being reported, particularly along the coast. Small outbreaks have been reported inland at Weld and Brighton.

SWEET GUM

A MOTH (Recurvaria dorsivittella Zell.)

Connecticut. E. P. Felt (August 13): Sweet gum foliage at Darien has been damaged somewhat by larvae of R. dorsivittella.

MAPLE

GREEN-STRIPED MAPLE WORM (Anisota rubicunda Fab.)

Virginia. C.R. Willey (August): Mr. French reports the green striped maple worm defoliating many silver maples on "Northside" of Richmond.

Kansas. H. R. Bryson (August 12): There has been considerable injury by the green maple worm on maple trees at the Agronomy Farm at Manhattan. The foliage has been greatly reduced.

JAPANESE MAPLE SCALE (Leucaspis japonica Ckll.)

Connecticut. E. P. Felt (August 13): The Japanese maple scale was reported by Mrs. C. A. Peters, of Farmingdale, L. I., as occurring in large numbers on soft maple and as killing a privet hedge. This insect is locally abundant and injurious in southwestern New England.

MOUNTAIN ASH

A SAWFLY (Pristiphora banksi Marl.)

Maine. H. B. Peirson (August): A sawfly, probably P. banksi Marl., has been attacking mountain ash at Boothbay, Augusta, Bar Harbor, and Portland.

JUNIPER AND CEDAR

JUNIPER SCALE (Diaspis carueli Targ.)

Connecticut. W. E. Britton (August 23): Fairly common in all parts of the State. Reported at New Haven attacking low juniper and red cedar.

New Jersey. R. D. Lott (August 16): The juniper scale has been causing considerable damage throughout the State on junipers, Juniperus hibernica, J. pfitzeriana, J. communis, J. virginiana, etc.

DEODAR WEEVIL (Pissodes deodarae Hopk.)

Mississippi. J. P. Kislanko (August 15): Deodar weevils are doing considerable damage to Cedrus deodara in Hattiesburg.

PINE

A BARK BEETLE (Ips grandicollis Eich.)

Connecticut. R. D. Friend (August 23): Several trees about 18 feet high were killed in a plantation at Simsbury by I. grandicollis. The trees were attacked in 1931. Many trees surrounding those killed were unsuccessfully attacked, the adults being "pitched out."

A PINE SHOOT MOTH (Eucosma gloriola Heinr.)

Connecticut. R. D. Friend (August 22): E. gloriola Heinr. are quite common in forest plantings at Windsor and Easton.

RED-HEADED PINE SAWFLY (Neodiprion lecontei Fitch)

Connecticut. W. E. Britton (August 23): N. lecontei are normally abundant on red pine at Killingworth; also, N. pinetum Nort. on white and Scotch pine, Southbury, July 25.

Pennsylvania. J. N. Knull (July 30): N. lecontei is abundant on a pitch pine plantation 2 miles south of Du Bois. Many of the trees are entirely defoliated. G. S. Perry, observer, J. N. Knull reported (July 30): The red-headed pine sawfly is abundant in pine plantation near Ansonia, Tioga County.

POPLAR

POPLAR BORER (Saperda calcarata Say)

Nebraska. M. H. Swenk (July 20 to August 25): Cottonwood trees in several localities were found infested with S. calcarata during the latter part of July.

VAGABOND GALL LOUSE (Mordwilkoja vagabundas Walsh)

Montana. A. L. Strand (August 17): The vagabond gall louse, P. vagabundus, is very injurious to poplar trees in north-central Montana.

A LEAF BEETLE (Lina tremulae Fab.)

Pennsylvania. J. N. Knull (July 30): The trembling aspens in various parts of Ella County are heavily infested with this insect. The leaves have turned brown on many of the trees owing to feeding of the larvae and adults.

WALNUT

WALNUT CATERPILLAR (Datana integerrima G. & R.)

Ohio. E. W. Mendenhall (July 30): The black walnut caterpillars are very abundant on black walnut and hickory trees and in many cases have defoliated the trees throughout central Ohio.

Illinois. W. P. Flint (August 19): The walnut caterpillar is unusually abundant this season on walnut, pecans, and hickories.

Missouri. L. Haseman (July 27): The walnut Datana is very abundant, especially in the western part of the State.

Nebraska. M. H. Swenk (July 20 to August 25): Damage to walnut trees by the walnut caterpillar continued until the end of July, when it abruptly ended.

Kansas. H. R. Bryson (August 15): The datanas on walnut, apple, and oak have caused considerable damage. The most serious damage by the first generation was confined to walnut trees in the eastern half of the State as far south as Lyndon and Euporia.

WILLOW

EUROPEAN WILLOW BEETLE (Plagiodera versicolora Laich.)

Connecticut. H. L. Bailey (August 22): The imported willow leaf-beetle has been found in considerable numbers in willow foliage in Bennington County.

COTTONWOOD LEAF BEETLE (Lina scripta Fab.)

Montana. A. L. Strand (August 17): The willow leaf beetle is very common and injurious on shade trees in north-central Montana.

INSECTS AFFECTING GREENHOUSE AND ORNAMENTAL PLANTS

ARBORVITAE

COMMON RED SPIDER (Tetranychus telarius L.)

Nebraska. M. H. Swenk (July 20 to August 25): The red spider T. telarius continued troublesome during August, especially on spruce and arborvitae.

Mississippi. C. Lyle and assistants (August): Considerable injury, particularly to arborvitae, by the common red spider was reported from many parts of the State. (Abstract, J.A.H.)

AZALEA

AZALEA MEALYBUG (Eriococcus azaleae Comst.)

Georgia. J. B. Gill (August 25): The azalea eriococcus was found infesting azalea bushes in Vienna. This species seemed to be causing somewhat serious injury to the heavily infested plants.

DAHLIA

POTATO LEAFHOPPER (Empoasca fabae Harr.)

Connecticut. N. Turner (July 19): Pompon dahlias were seriously injured, showing tipburn and curled leaves. Only adults present.

EUONYMUS

EUONYMUS SCALE (Chionaspis euonymi Comst.)

Connecticut. E. P. Felt (August 13): The Euonymus scale was reported through W. B. Mix, as seriously injuring Pachysandra at Old Greenwich.
W. E. Britton (August 23): This insect is common everywhere on certain varieties of Euonymus japonicus. A severe infestation was reported from Branford, August 8.

FERN

FERN SCALE (Hemichionaspis aspidistrae Sign.)

Mississippi. C. Lyle (August 23): Fern fronds showing a severe infestation of the fern scale were received from Crenshaw on August 2.

GLADIOLUS

GLADIOLUS THRIPS (Taeniothrips gladioli M. & S.)

Maine. C. R. Phipps (August 22): The gladiolus thrips is very abundant in York County.

Connecticut. W. E. Britton (August 22): This insect is causing severe damage on gladiolus throughout the State. Much injury is also caused by Frankliniella tritici Fitch and F. fusca Hinds.
E. P. Felt (August 13): The gladiolus thrips was reported as generally and seriously infesting gladioli at East Schodack.

New Jersey. R. B. Lott (August 16): The gladiolus thrips is very abundant this year, causing the loss of entire crops in some sections of the State.

Pennsylvania. C. A. Thomas (August 24): The gladiolus thrips is evidently spread throughout the southeastern border counties of Pennsylvania, and extensive injury has been found in a number of commercial plantings, especially in those plantings where new stock has been received from outside during the past year or two. This is undoubtedly the worst pest with which the gladiolus growers in this section have to contend. (August 15): One grower near Thorndale reports over 90 per cent of his gladiolus flowers unfit for market because of this thrips.

Minnesota. A. G. Ruggles (August 23): T. gladioli is becoming more and more abundant around the Twin Cities. Our largest growers of gladiolus have not yet had the pest.

Tennessee. G. M. Bentley (August 17): Thrips are reported at Chattanooga and Dayton. Found injuring the blooms of gladiolus.

GENISTA

A PYRALID (Tholeria reversalis Guen.)

California. R. E. Campbell (August 23): Genista plants are again being defoliated by T. reversalis in many parts of Los Angeles County.

IRIS

IRIS BORER (Macronoctua onusta Grote)

Pennsylvania. H. E. Hodgkiss (July 26): Damage by the iris borer is reported to be serious in the southeastern area.

MAGNOLIA

MAGNOLIA SCALE (Neolecanium cornuparvum Thro)

New York. W. E. Blauvelt (July): Specimens of N. cornuparvum have been received. They were reported on magnolia.

NARCISSUS

LESSER BULB FLY (Eumerus tuberculatus Rond.)

Virginia. C. R. Willey (August): Lesser bulb flies are very scarce in Virginia plantings (bin inspection) this fall. Adults apparently emerged during very warm weather in the last part of February and were killed by the "freeze" the first of March.

ROSE

ROSE CURCULIO (Rhynchites bicolor Fab.)

Nevada. G. G. Schweis (August 17): The rose curculio is reported as damaging roses in Reno.

SADDLE-BACK CATERPILLAR (Sibine stimulea Clem.)

Delaware. L. A. Stearns (August 23): The saddle-back caterpillar was reported on rose at Rehoboth and Lewes, August 9.

BRISTLY ROSE SLUG (Cladius isomerus Mort.)

Indiana. H. O. Deay (July 25): Rose leaves which had been injured by the bristly rose slug were received from Hudson, July 1, and from Albion, July 12.

WISTARIA

GIANT SKIPPER (Epargyreus tityrus Fab.)

Connecticut. W. E. Britton (August 22); Leaves of wistaria were nearly all rolled and partly eaten by this insect at New Haven.

INSECTS ATTACKING MAN AND DOMESTIC ANIMALS

MAN

DOG TICK (Dermacentor venustus Bks.)

Maryland. Washington Herald (August 19): Following the discovery of two cases in the District, 13 cases of Rocky Mountain spotted fever have been reported in Maryland, Dr. Robert H. Riley, chief of the State department of health, announced last night. Fourteen cases of typhus fever also have been reported in Maryland. Four cases of spotted fever also have been reported in Anne Arundel County, two each in Montgomery and Dorchester Counties, while single cases have been discovered in Prince Georges, Baltimore, Worcester, Harford, and Allegany Counties. Most of the typhus cases reported are on the Eastern Shore.

DEER FLIES (Chrysops spp.)

Oregon. H. H. Stage (August 3): Deer flies are unusually abundant about Summer Lake this season and two cases of tularemia have been reported.

A BLOOD-SUCKING CONENOSE (Triatoma protracta Uhl.)

Nevada. G. G. Schweis (August 17): The western blood-sucking conenose is reported as biting residents in southern Nevada and causing severe illness.

FLEAS (Ctenocephalides spp.)

Ohio. T. H. Parks (August): Complaints about infestations of fleas in homes and farm buildings have been much more abundant than in the average year. In the city of Columbus several homes have required fumigation because of the insects.

South Dakota. H. C. Severin (August 23): An unusually large number of complaints about dog and cat fleas were received during the past month.

Nebraska. M. H. Swenk (July 20 to August 25): Complaints of the infestation of houses with fleas (C. felis Bouche) which were abundantly received during July, continued to be received less abundantly from eastern Nebraska counties during the period here covered.

HOUSE FLY (Musca domestica L.)

North and South Dakota. W. G. Bruce (August): House flies are generally reported in unprecedented numbers over the greater part of North and South Dakota. (Abstract, J.A.H.)

MOSQUITOES (Culicinae)

South Atlantic Coast. W. E. Dove (July 25): During the early part of the month salt-marsh mosquitoes (Aedes sollicitans Walk.) appeared in Charleston but were

not numerous. At Savannah, Ga., this species was very abundant during the past month. According to residents they were more numerous than at any time during the past 40 years. A wind from the marshes during a high tide is said to have been responsible for the large numbers. By July 25 most of the mosquitoes had disappeared.

South Carolina. D. G. Hall & F. M. Prine (June 10-30): At Charles, Culex quinquefasciatus Say, became very abundant in the city and was regarded by residents as the salt-marsh mosquito. Extensive breeding places were found in pools adjoining the city dumping grounds. As many as 200 specimens of this species could be found in one room during a single evening in a Charleston residence.

Florida. J. B. Hill (July 25): There are reports that A. taeniorhynchus Wied. was abundant in the vicinity of Fort Pierce following winds from the marshes of Vero Beach.

Oregon. H. H. Stage (August 3): A. dorsalis Meig. and A. fitchii Felt and Young are more numerous than last year, owing no doubt to the plentiful water supply this year. Anopheles maculipennis Meig. was found much less numerous than last year about the lakes and irrigation districts of southeastern Oregon. Larvae of Culex tarsalis Coq. were found widely scattered and in many different kinds of water.

EYE GNATS (Hippelates spp.)

South Carolina. J. N. Tenhet (August 2): Eye gnats have been remarkably abundant for the past month in Fairfax. Conjunctivitis is almost epidemic among children of the community. Eye gnats are usually abundant at this season of the year, but last year and this year they have been particularly bad.

Mississippi. C. Lyle and assistants (August): The eye gnats have been very annoying in Stone and Forrest Counties, for the past few days.

SANDFLY (Culicoides sp.)

South Carolina. W. E. Dove (July 1): At Charleston a few adults C. canithorax Hoffman could be found in densely shaded areas near salt marshes. In marshes receiving seepages of salt water C. melleus Coq. and C. dovei Hall were annoying

Georgia. W. E. Dove (July 25): Near the marshes of Savannah sand flies are not annoying during the day but enter the residences during the early morning hours. The window screens do not give any protection.

CATTLE

HORN FLY AND STABLE FLY (Haematobia irritans L. and Stomoxys calcitrans L.)

North Dakota. W. G. Bruce (July): Stable flies and horn flies have appeared in abundance during the past two weeks, causing considerable annoyance to cattle and horses. Dr. Dinwoodie, extension veterinarian, and formerly with The Dakota Farmer, states that he never saw these pests so troublesome and

destructive and that he could notice the daily decrease in the weight and condition of cattle due to the annoyance of these flies. It has been dry here during the past three weeks and this may have had some effect upon the increase in the number of flies.

W. G. Bruce (August): Flies have been so generally troublesome, particularly Stomoxys calcitrans L., that many cases of lameness in cattle was due to the animals being forced to stand in water and mud, reported from many localities. The condition was particularly bad in McKenzie and Dickey Counties. (Abstract, J.A.H.)

South Dakota. W. G. Bruce (August 1): Ranchers state that flies have never been so abundant in 30 years. The number of horn flies on cattle per head average from 200 to over 1,000; and the number of stable flies per head estimated average from 25 to 100. Anthrax and a foot disease, probably foot rot, have been rather prevalent this season, and it is thought that the abundance of stable flies may have some bearing on this condition.

W. G. Bruce (August): The stable fly is extremely abundant in Columbia, Chamberlin, Pierre, Aberdeen, Redfield, Miller, and west to the Black Hills. (Abstract, J.A.H.)

Kansas. H. R. Bryson (August 15): There was an outbreak of biting flies this season. These included the horn flies and stable flies. The horn fly was particularly abundant. More requests for fly spray formulas have been received than have been sent in for many seasons.

Missouri. L. Haseman (July 27): Dairymen and others report fewer horn flies than usual.

HORSE

NOSE BOTFLY (Gastrophilus haemorrhoidalis L.)

North Dakota. W. G. Bruce (July): On July 7 the first nose botfly was observed in the vicinity of Grand Forks; practically every horse in harness is provided with a nose guard of some sort, to offer protection against the attacks of the nose fly.

North and South Dakota. W. G. Bruce (August): Nose flies were so abundant early in August that practically every horse between [illegible] South Dakota and Winnipeg, Canada, was protected from the nosefly by some sort of nose protector. (Abstract, J.A.H.)

HORSE BOTFLY (Gastropilus intestinalis DeG.)

North and South Dakota. W. G. Bruce (August): The common botfly appeared in North and South Dakota during the second week in August. They are not unusually abundant. (Abstract, J.A.H.)

HORSE FLIES (Tabanidae)

North Dakota. W. G. Bruce (July): Horse flies, Chrysops spp., were especially numerous in the vicinity of Grand Forks during the early part of July, and it was not uncommon to see 8 to 10 of these pests on one horse.

Missouri. L. Haseman (July 27): Horse flies have been scarce during the month in central Missouri.

BEES

A ROBBER FLY (Deromyia ternatus Loew)

Florida G. H. Bradley (July 30): D. ternatus was reported by Mr. J. R. Rushing, a beekeeper, as killing numbers of his bees about August 1.

BULLFROG (Rana sp.)

California. R. Bogue (August 23): The town of Tipton reported that bullfrogs are especially plentiful this year as a result of the wet season last winter and are doing considerable damage by preying upon honeybees and hives. One or two ranches have been hard hit and the ranchers in this vicinity have started a campaign against the frogs to prevent further damage to hives in this vicinity.

H O U S E H O L D A N D S T O R E D - P R O D U C T S

I N S E C T S

ARGENTINE ANT (Iridomyrmex humilis Mayr)

South Carolina. A. Lutken (August 24): Argentine ants are causing extreme annoyance in 22 towns in the State.

Mississippi. C. Lyle and assistants (August): The Argentine ant was recorded for the first time from McCarley and Mathiston. It was also reported for the first time from Adams County. (Abstract, J.A.H.)

ANTS (Formicidae)

Mississippi. C. Lyle (August 23): Ants identified by M. R. Smith as Cremastogaster ashmeadi Mayr were received on July 26 from McComb where they were reported as destroying insulation of telephone wires.

C. Lyle and assistants (August): Native ants have been unusually bad this summer, especially the fire ants in Yalobusha, Grenada, and Montgomery Counties. Fire ants are very abundant at Ocean Springs, Jackson County.

CLOVER MITE (Bryobia praetiosa Koch)

North Carolina. R. W. Leiby (August 3): One report of a heavy infestation of furniture, beds, and carpets by this animal (B. praetiosa) on July 22 at Concord, R. F. D.

TERMITES (Reticulitermes spp.)

United States. T. E. Snyder (July): During the month of July 134 cases of termite damage were reported to the Bureau of Entomology. The following list gives the number of cases reported from each section: New England, 5; Middle Atlantic, 39; South Atlantic, 23; East Central, 9; North Central, 2; West Central, 11; Lower Mississippi, 38; Southwest, 2; Pacific Coast, 5.

INSECT CONDITIONS IN PUERTO RICO DURING AUGUST, 1932

G. N. Wolcott
Insular Experiment Station, Rio Piedras, Puerto Rico

A survey of the status of the cottony cushion scale, Icerya purchasi Mask., conducted during the middle of August shows that it is now less abundant in citrus groves than at any time since its discovery, and difficulty is experienced in finding suitable localities for the liberation of lady-beetles.

Every caterpillar collected from nearly 3,000 pods of lima beans maturing during June and July at Isabela was Etiella zinckenella Treit. They averaged 37 caterpillars per 100 pods, a few of them being parasitized by Heterospilus etiellae Rohwer.

A heavy infestation of the "pulga Americana" (Systena basalis J. Duv.), normally a flea-beetle pest of tobacco, has been noted on sweetpotato at Rio Piedras, at least half the superficial leaf area of vines at one end of a field being eaten by these beetles.

The sweetpotatoes were also heavily infested with Cylas formicarius Fab., the adults of which feed from the under side of the leaves on petioles, midribs, and the larger veins. This insect has also been reported as attacking cotton seedlings in a field possibly half a mile away from the sweetpotato field.

Despite the very imperfect clean-up of cotton fields last year and the small area planted to cotton this year on the north coast, infestation by the pink boll worm (Pectinophora gossypiella Saund.)is very low by the middle of the picking season, no infestation of more than 10 per cent being noted in numerous fields examined between Isabela and Arecibo on August 4, and in two fields no infested bolls were found.

INSECT CONDITIONS IN HAITI FOR MAY, 1932

By Andre Audant
Service National de la Production Agricole
Port-au-Prince, Haiti

Young shoots of sugarcane are infested with the sugarcane mealybug (Pseudococcus boninsis Kuwana).

The cotton leaf worm (Alabama argillacea Hbn.) has appeared at Hatte-Lathan, the cotton experiment farm near Port-au-Prince. This year the outbreak was most severe and the damage done in some places ran as high as 80 per cent.

Corn in the southern and central parts of Haiti is attacked by the corn ear worm (Heliothis obsoleta Fab.)

An outbreak of the fall armyworm (Laphygma frugiperda S. & A.) appeared at Hatte-Lathan, the worms destroying the grass, Panicum sp., very rapidly.

The sphinx worm Protoparce sexta Johan. occurred on tobacco leaves of the southern plantations, causing little damage.

The melon aphid (Aphis gossypii Glov.) is very abundant on cucumbers and melons in the central plains.

The bean leafhopper (Empoasca fabalis DeL.) is pretty abundant on beans.

The banana root borer (Cosmopolites sordidus Germ.) was reported from the Cayes district seriously attacking potato tubers.

Citrus trees are attacked by the purple scale (Lepidosaphes beckii Newm.) the black flies Aleurodicus minimus Quaint., and the citrus mealybug (Pseudococcus citri Risso).

The coffee cricket (Chremon repentinus Rehn) is causing some damage to the young stems of coffee trees in the south.

At the western end of the Island, near Dame-Marie, the cacao thrips (Heliothrips rubrocinctus Giard) was causing grave injury to the cacao trees.

The oleander scale (Aulacaspis pentagona Targ.) is very abundant on oleander bushes and is damaging them severely.

The rose scale (Chrysomphalus aonidum L.) is still present in the beds of roses, though diminishing in number (Port-au-Prince).

INSECT CONDITIONS IN COSTA RICA DURING MAY, JUNE, JULY, AND AUGUST 1932

By C. H. Ballou
San Jose, Costa Rica

The leaf-footed bug (Leptoglossus zonatus Dall.) was reported as quite abundant on apple, injuring terminal buds, fruit, and leaves, at San Pedro de Montes de Oca. It was also injurious on ripe and nearly ripe tomatoes.

The citrus blackfly (Aleurocanthus woglumi Ashby) was abundant and injurious in Maceta Central and San Pedro de Montes de Oca. This insect is always serious up to an altitude of 1350 meters.

The apple aphid (Aphis pomi DeG.) was damaging apple leaves at San Jose during the early part of August; it was also attacking quince.

The hemispherical scale (Saissetia hemisphaerica Targ.) is always present but sparse, and not serious. Scattered on soursop, not important in San Pedro de Montes de Oca.

The purple scale (Lepidosaphes beckii Newm.) is always present and occasionally harmful in San Pedro de Montes de Oca.

Papilio anchisiades Esp. larvae did considerable damage on orange trees in brood that emerged January 16 in San Pedro de Montes de Oca. The next two broods developed on matasano trees (q.v.); consumed 30 per cent of the foliage of a tree 15 feet high; pupated July 10, emerged August 15; of 28 pupae all emerged within 3 days. The period of emergence on orange in January was much longer, covering about two months.

Membracis mexicana Guer. scars tender shoots in San Pedro de Montes de Oca, and causes the drying of spots on the tender shoots. Not important.

Coccus hesperidum L. was abundant on isolated trees in May in San Pedro de Montes de Oca, and did some damage on newly budded trees when they broke into growth.

SUMMARY OF INSECT CONDITIONS IN BRAZIL FOR 1931

By Edson J. Hambleton

Escola Superior de Agricultura e Veterinaria, Minas Geraes

The following notes on insect observations were taken almost entirely on the college grounds at Vicosa, Minas Geraes. Reference is made to those of Dr. Carlos Moreira, Institute Biologico, Rio de Janeiro.

Atta sexdens Forel is by far the worst insect in all Brazil. Many farm lands have absolutely been abandoned.

Stephanoderes hampei Ferr., which was introduced into the State of Sao Paulo in coffee seed several years ago, was well established before the plague was announced by a grower in Campinas in 1924. Regardless, however, of the thorough work and the continued fight that has been waged in some 30 counties, the insect continues to spread and is causing almost total loss on plantations where control is not practiced. Farms in the heaviest infested regions that did not produce 1 per cent of sound coffee a few years ago are now producing 95 per cent marketable coffee. Prorops nasuta Wtrst. was collected in Uganda, Africa, by Dr. A. Hempel. Reports from Sao Paulo at the end of this year indicated that the parasite was becoming well established and that recoveries were being made within a kilometer from the liberation points.

The Mediterranean fruit fly (Ceratitis capitata Wied.) was present in usual numbers throughout most of the year. Peach, tangelo, and grapefruit suffered greatest losses. The West Indian fruit fly (Anastrepha fraterculus Wied.) was responsible for heavy losses in peach, tangelo, grapefruit, arasa, and guava. Among the other host fruits attacked by both species of flies were the Surinam cherry, apple, pear, orange, and coffee. According to C. Moreira, the above fruit flies, with the addition of Lonchaea pendula Bezzi, were more abundant this year at the Estacao de Pomicultura in Deodora, State of Rio de Janeiro, where they caused greater losses to grapefruit.

Gymnandrosoma aurantianum Costa Lima appeared during April and May for the first time in the College orchards. A considerable number of Satsuma and orange fruits ripened prematurely and dropped.

Several species of Papilionidae common throughout Brazil oftentimes completely defoliate grown citrus trees. Papilio anchisiades capys Hbn. was more abundant this season, although highly parasitized.

Melipona ruficrus Latr. attacks the buds, flowers, and young foliage of citrus. In spite of the fact that many nests of these bees were destroyed, considerable damage was noted on younger trees.

Aulacaspis pentagona Targ. severely attacks peach and mulberry in many regions of the State (Minas Geraes). It is by far the most important scale insect attacking peach in Brazil.

Macrodactylus dorsatus Germ. (det. E. A. Chapin) was observed feeding on the blossoms of many common plants. Another related species, M. pumilio Burm., was found during November in Uba destroying all the fruits on some two dozen peach trees.

The San Jose scale (Aspidiotus perniciosus Comst.) which has confined itself to a part of the State of Rio Grande do Sul, appeared in the region of Rio Negro in the State of Parana this year, (Carlos Moreira.)

Eriosoma lanigerum Hausmann has been well held in check by the parasite Aphelinus mali Hald. (C. Moreira.) This parasite is now distributed in the States of Rio Grande do Sul, Sao Paulo, and Minas Geraes, having been introduced some years ago. (Moreira and Hambleton.)

Schistocerca flavofasciata DeG. (det. A. N. Caudell) is very common through the citrus nursery on the College grounds, where it has been taken feeding on the foliage.

In a small planting of Rolinia deliciosa all of the trees were heavily infested with Heilipus catagraphus Germ. Some trees died during the past year.

A new scale insect found on Annona squamosa on the College grounds was described as Pseudaulacaspis sordidus n. sp. by Dr. A. Hempel, Instituto Biologico, Sao Paulo, in October, 1931.

Coccus mangiferae Green was found heavily infesting a small manga tree imported from the United States of America during September. According to Hempel, this is the first record of its presence in Brazil.

The cotton worm (Alabama argillacea Hbn.) appeared this year during January. The infestation was quite severe where control measures were not practiced. Oviposition continued until late May, at which time lower temperatures accompanied by almost 100 per cent parasitism reduced the infestation to a minimum.

The pink boll worm (Pectinophora gossypiella Saund.) has been reduced to a minimum. (C. Moreira.) However, in several hectares grown in the experimental plots at the College, the infestation ran as high as 98 per cent in practically all varieties.

Gasterocercodes gossypii Pierce appeared in the cotton plots at the Experiment station in Piracicaba, Sao Paulo, where it infested a large number of plants. (C. Moreira.) At Vicosa, Minas Geraes, this insect ranks third in importance of all those affecting cotton.

The cotton-stainer Dysdercus fernaldi Ballou (det. H. G. Barber) is very abundant here.

The fall armyworm (Laphygma frugiperda S. & A.) and a sugarcane borer (Diatraea saccharalis Fab.) did considerable damage to early field corn.

A bean leaf webber, Laprosema indicata Fab. (det. W. T. M. Forbes) was common on pole beans during April and May. Adult moths were very numerous at

electric lights during the latter half of May.

Four chrysomelid leaf beetles are generally present in bean plantings. One of these, Diabrotica speciosa Cram., is also common on a great variety of other crops.

The cane borer Diatraea saccharalis Fab. constitutes one of the principal cane insects in the State of Minas Geraes. Dr. C. Moreira has reported that the larvae of this insect, which generally confine their attack to younger canes, appeared in some fields in older stocks (1931).

Among the insects attacking sugarcane, Tomaspis literata Lep. & Serv. appeared on the increase this year but caused smaller losses than in 1920 and 1924, when it threatened cane growers in many regions. This pest is known to occur in the States of Minas Geraes, Sao Paulo, and Parana and there are varieties occurring in Matto Grosso and Rio Grande do Sul. (C. Moreira.) Several species of family Cercopidae attack sugarcane in Brazil. Mahanarva indicata Dist., the species most commonly found, is widely distributed through Minas Geraes. Although it has never been considered of much importance, there is reason to believe that it is likely to cause serious losses in certain varieties of cane.

Two scarabaeids, Ligyrus humilis Burm. and L. fossator Burm. appeared or were first noticed in a large sugarcane plantation at Rio Branco, Minas Geraes. The grubs of these beetles destroyed several acres of a new planting during 1930. In 1931 the infestation, confined chiefly to a low, poorly drained area, was very much reduced after soil treatments.

Tomatoes were heavily attacked during May to July by Leucinodes elegantalis Guen., whose larvae tunnel their way into the young fruits, completing their development at harvest time. Losses as high as 80 per cent were not uncommon. This "broca" is the most important insect enemy of tomatoes.

A sweetpotato curculionid, Euscepes batatae Waterhouse, common in all Brazil, caused higher losses in imported potatoes in the College plots this year. The weevils continue their destruction long after the potatoes are placed in storage.

The pickle worm (Diaphania nitidalis Stoll) caused 75 per cent loss in a small planting of cucumbers at Vicosa. Adults of this species and of D. hyalinata L. were very common at electric lights during the period from November until June.

Leucinodes elegantalis Guen., which caused such losses in tomato, was also found attacking eggplant on several occasions.

The grape phylloxera (Peritymbia vastatrix Planchon) is still limited to a small zone in Rio Grande do Sul. (C. Moreira.)

A lepidopterous larva, Brassolis astyra Godt., was present in sufficient numbers this year to almost defoliate many palm trees at the College.

Two new scale insects collected at Vicosa in October and November have been described as Saissetia minensis Hempel and Mesolecanium planum Hempel, both new to science.

On the ornamental Thuja occidentalis on the College campus were observed for the first time scale insects determined by A. Hempel as Diaspis visci Schr. He reports that this is the first time that the species has been known to occur in Brazil.